TEXTILE BULLETIN

OL. 66 APRIL 15, 1944 NO. 4

Spinning trouble may originate in the Opening Room

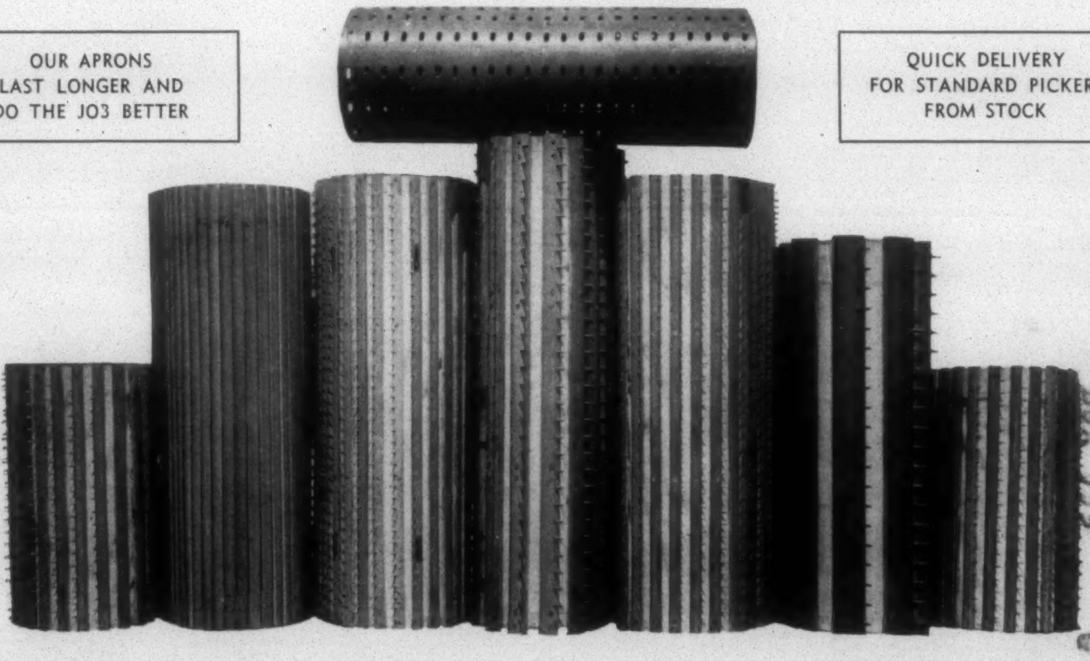
—and the "Trouble Starter" may be faulty Picker Aprons

Aprons perform a most important function in the operation of Picking Machinery. If they are of poor quality, or are improperly constructed, they become weak links in your production chain, and expensive delays and imperfect yarn invariably follow.

Our Picker Aprons are made of the very highest grade materials and the assembling is performed by mechanics skilled in this exacting work. That's why they have established an enviable reputation for performance and long life in leading mills from Virgiina to Texas.

OUR APRONS
LAST LONGER AND
DO THE JOB BETTER

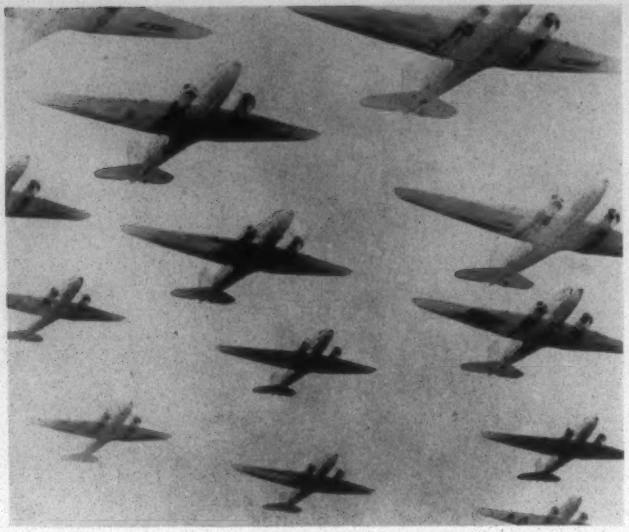
QUICK DELIVERY
FOR STANDARD PICKERS
FROM STOCK



A Complete Line of Textile Aprons Including the New Hopper Feed Apron No. 8-11, Made Without Canvas Back

TROY WHITEHEAD MACHINERY COMPANY
Phone 3-9831 CHARLOTTE, N. C. P. O. Box 1694

INSTITUTE FOR RESEARCH IN
SOCIAL SCIENCE AUG 44
CHAPEL HILL N C
BOX 539
2529



Any "Wearer of the Wings"
knows that

PRECISION BOMBING

would not be possible
without

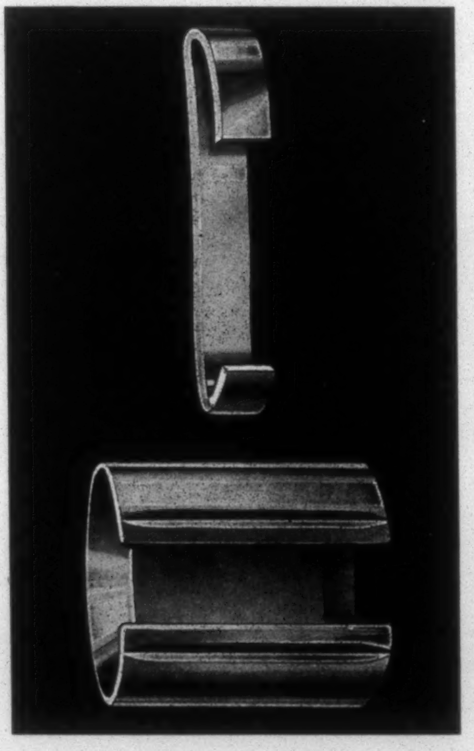
PRECISION INSTRUMENTS

—and neither can effective results be obtained in the spinning room with inferior "instruments." Travelers that are not correctly designed; that are not uniform; or that do not have the proper metal composition and weight, can cause plenty of "misses" on production schedules and yarn quality.

U.S. Ring Travelers

will help you score hits on both targets because these travelers are made of the best materials obtainable, and at every step of manufacture are subjected to scientific inspection and control to assure their perfect uniformity.

Free Samples on Request



U. S. RING TRAVELER COMPANY

AMOS M. BOWEN, President and Treasurer

PROVIDENCE, R. I. **GREENVILLE, S. C.**

A Traveler for Every Fibre

Published Semi-Monthly by Clark Publishing Company, 218 W. Morehead St., Charlotte, N. C. Subscription $1.50 per year in advance. Entered as second-class mail matter March 2, 1911, at Postoffice, Charlotte, N. C., under Act of Congress, March 2, 1897.

INDEX TO ADVERTISERS – PAGE 47

Salute

TO THE U. S. MERCHANT MARINE

. . . and to those American Manufacturers who supply them with the finest of Clothing and Equipment.

CFC

BUY U. S. WAR BONDS

COMMERCIAL FACTORS CORPORATION

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Established 1828

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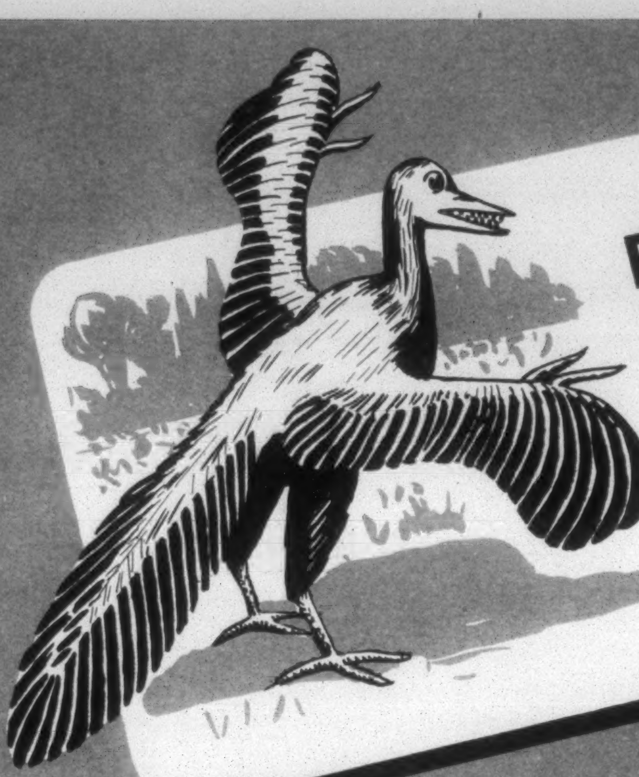


FROM FAME TO FOSSILDOM . . . *in one easy lesson!*

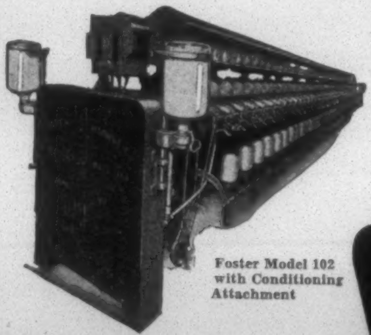
In prehistoric times, the three-clawed, sharp-toothed Archaeopteryx was the king-pin of birds. Its fame was widespread among other geologic "reptiles." Yet inability to adapt itself to changing conditions made it the fossil it is today!

Equipping your business with flexible machinery to cope with present swiftly-changing economic conditions is the best way to avoid the fate of the Archaeopteryx. The Foster Model 102 provides this adaptability with a 7-way flexibility.

7 FLEXIBILITY FEATURES

1. It will wind any kind and any count of staple yarn from fine-combed cotton or rayon for tropical fabrics to heavy wool yarns for arctic cloths.
2. It will wind a straight base cone for warping or a convex base cone for knitting with a simple adjustment.
3. It will produce 9 different angles of wind from 9° to 18°. Important if you radically change your count or type of yarn.
4. It will wind package-dyed yarn, even if damp. No jumping out of guides.
5. It will wind emulsion-treated yarn. In fact, it is frequently equipped with an emulsion attachment.
6. Changeovers from cones to tubes, or vice versa, are comparatively inexpensive.
7. One side can wind cones and the other tubes, if desired.

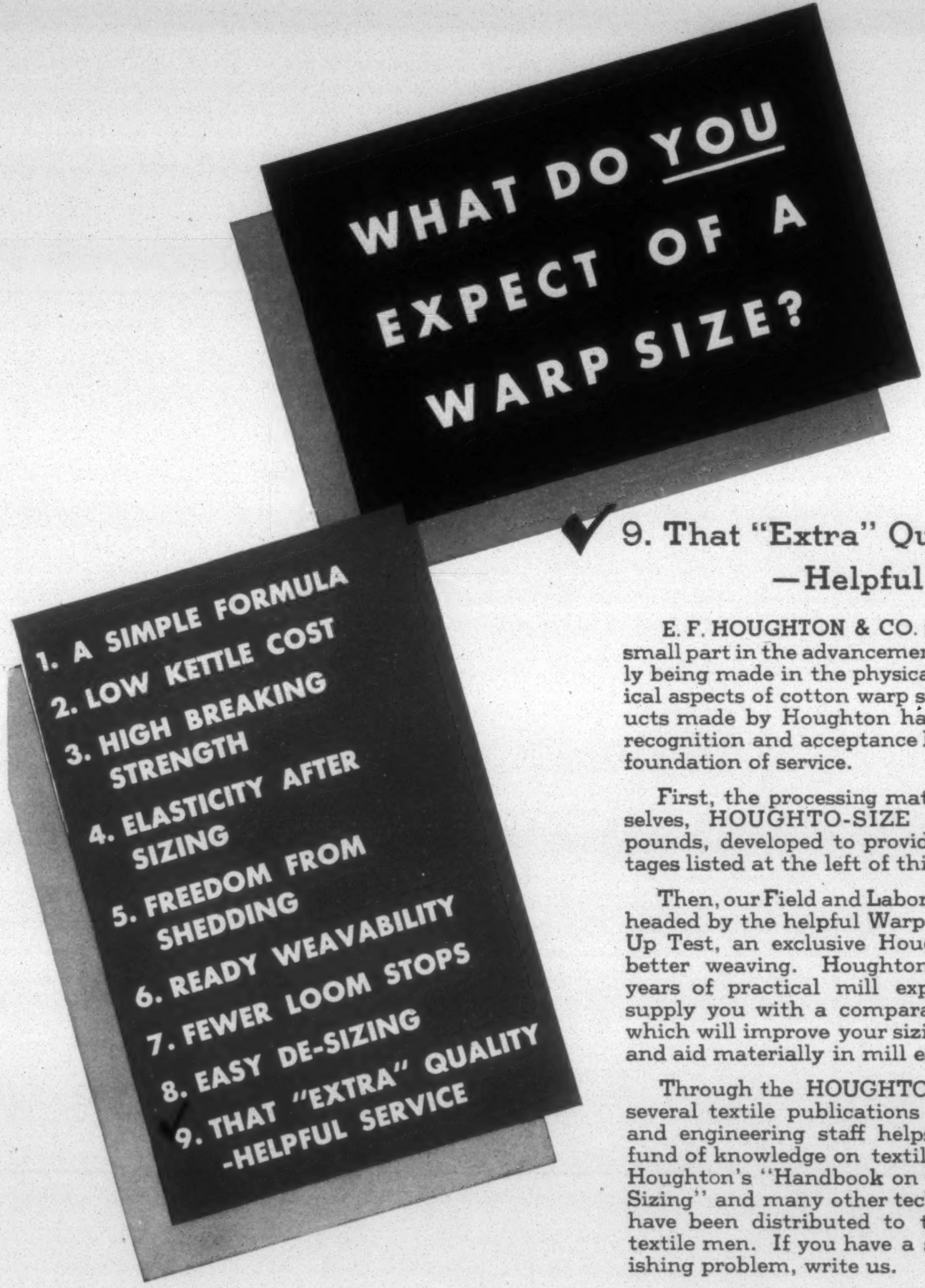
FOSTER MACHINE CO., Westfield, Mass.
Southern Office, Johnston Bldg., Charlotte, N. C.



Foster Model 102 with Conditioning Attachment

FOSTER MODEL 102

FOR WINDING COTTON · WOOL · WORSTED · MERINO
MERCERIZED · SPUN SILK AND SPUN RAYON YARNS



WHAT DO YOU EXPECT OF A WARP SIZE?

1. A SIMPLE FORMULA
2. LOW KETTLE COST
3. HIGH BREAKING STRENGTH
4. ELASTICITY AFTER SIZING
5. FREEDOM FROM SHEDDING
6. READY WEAVABILITY
7. FEWER LOOM STOPS
8. EASY DE-SIZING
9. THAT "EXTRA" QUALITY -HELPFUL SERVICE

✓ 9. That "Extra" Quality —Helpful Service

E. F. HOUGHTON & CO. is playing no small part in the advancements constantly being made in the physical and chemical aspects of cotton warp sizing. Products made by Houghton have won wide recognition and acceptance based on this foundation of service.

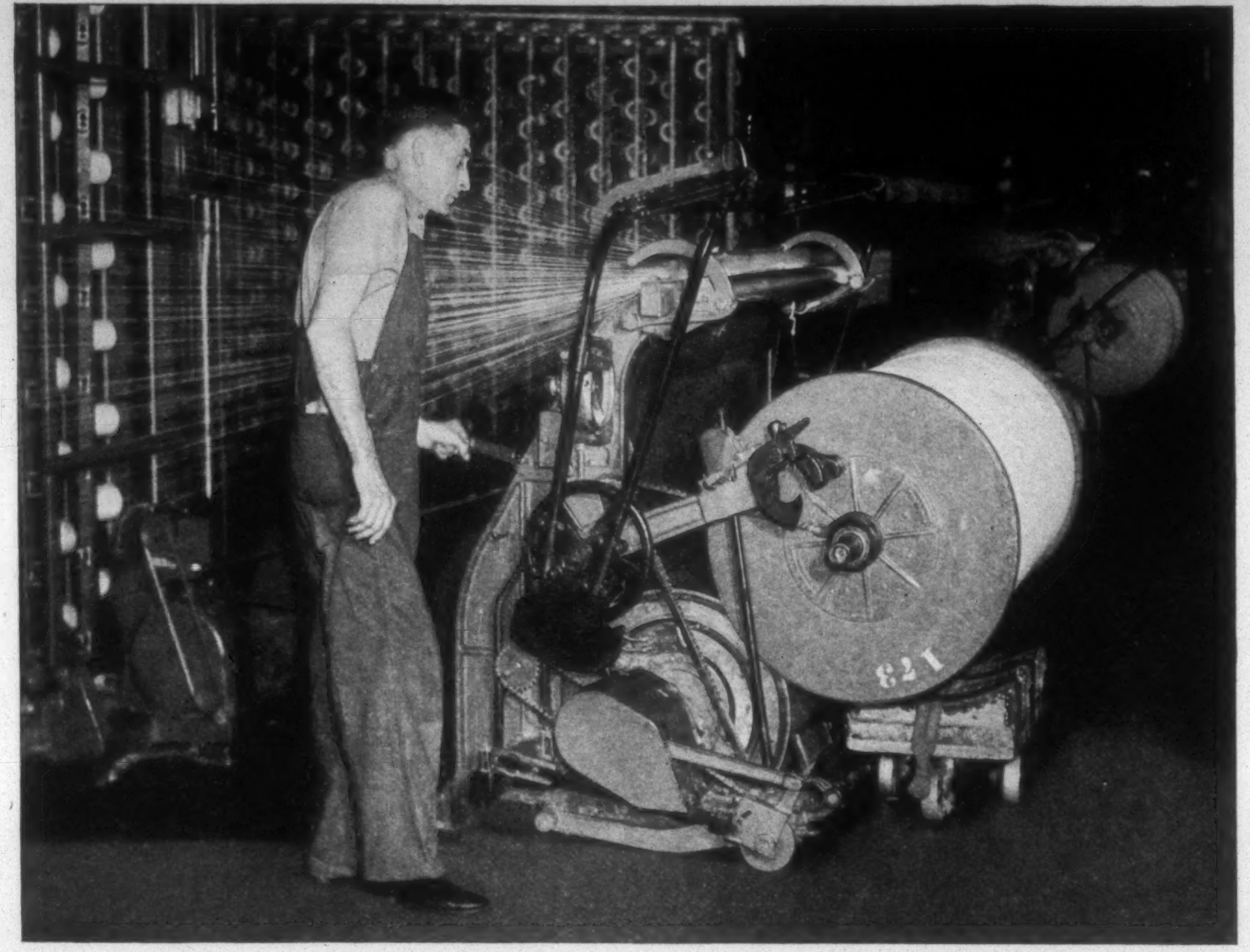
First, the processing materials themselves, HOUGHTO-SIZE sizing compounds, developed to provide the advantages listed at the left of this page.

Then, our Field and Laboratory service, headed by the helpful Warp Size Check-Up Test, an exclusive Houghton aid to better weaving. Houghton men, with years of practical mill experience, can supply you with a comparative analysis which will improve your sizing procedure and aid materially in mill efficiency.

Through the HOUGHTON LINE and several textile publications our research and engineering staff helps build up a fund of knowledge on textile processing. Houghton's "Handbook on Cotton Warp Sizing" and many other technical papers have been distributed to thousands of textile men. If you have a sizing or finishing problem, write us.

E. F. Houghton & Co.
303 W. Lehigh Ave., Philadelphia, Pa.
1301-05 W. Morehead St., Charlotte, N. C.

HOUGHTO-SIZE



Makes Easy Work of Beam Loading

ONE of the many features of the Barber-Colman Super-Speed Warper is the beam loader shown in the above picture. With this handy unit, one man can easily and quickly load and unload even the heaviest beams. The loader consists of a hand-crank-operated double chain hoist, with hooks to drop over both ends of the beam shaft. For unloading a full beam, as the picture shows, turning the crank pays out the chains and the beam rolls down over the driving drum until it rests on the beam truck. For loading, the beam is hooked and then drawn up over the driving drum until the shaft is seated in its bearings. Thus the operation of the loader is extremely simple and requires very little effort. Changing of beams is accomplished rapidly, the average time for the complete unloading and loading operation being about three minutes. This is only one of many ways in which Barber-Colman Super-Speed Warpers help to increase production and reduce effort, thus doing their part toward making more war goods faster.

For Example . . .

The following data is from a mill running heavily on war goods.

Count	30s
Ends on Beam	420
Yardage on Beam	30,000
Net Weight of Full Beam, 475 lbs.	
Beams per Warper per 24 hr. Day.	22

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • TWISTER CREELS • MOISTURE CONTENT CONTROLS

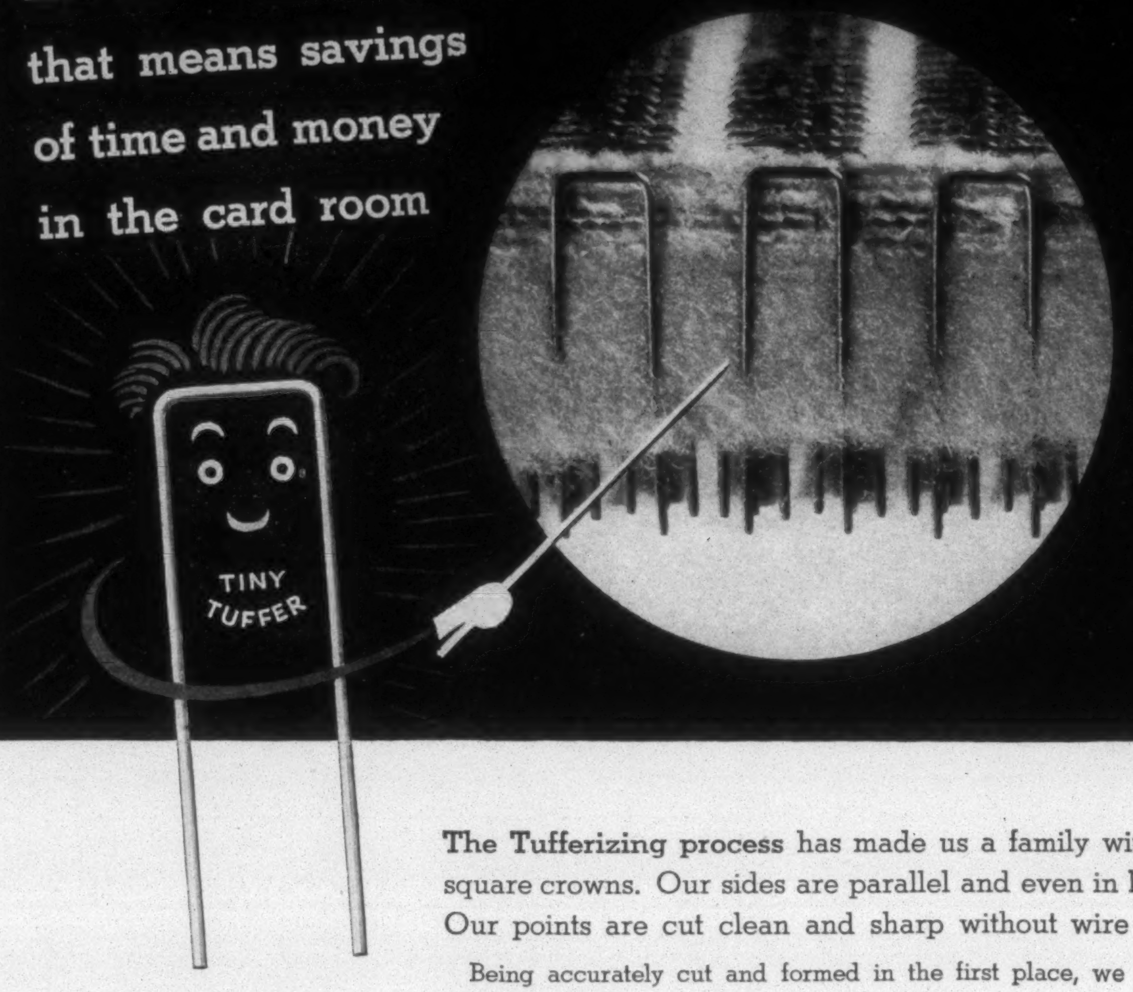
BARBER-COLMAN COMPANY

ROCKFORD, ILLINOIS, U. S. A.

FRAMINGHAM, MASS., U. S. A. GREENVILLE, S. C., U. S. A. MANCHESTER, ENGLAND

It's "TUFFERIZED"

that means savings
of time and money
in the card room



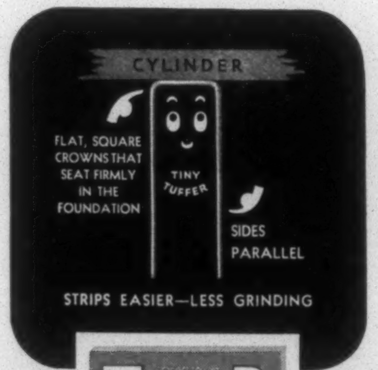
The Tufferizing process has made us a family with flat, square crowns. Our sides are parallel and even in length. Our points are cut clean and sharp without wire burrs.

Being accurately cut and formed in the first place, we are not robbed of temper by excessive grinding to get us in shape to go on your cards. Our flat, square crowns nestle snugly between the cylinder and foundation so you can draw us up smoothly and evenly. Our sides remain parallel and our points stay in position at all times.

This means easier stripping, less grinding, longer life, better carding. You can't do better than to *standardize on Tuffer products.*

TUFFER PRODUCTS

Card Clothing for Woolen, Worsted, Cotton, Asbestos and Silk Cards • Napper Clothing, Brush Clothing, Strickles, Emery Fillets. Top Flats Recovered and extra sets loaned at all plants. Lickerins and Garnet Cylinders from 4 to 30 inches and Metallic Card Breasts Rewired at Southern Plant • Midgley Patented, and Howard's Special Hand Stripping Cards • Inserted Eye & Regular Wire Heddles


CYLINDER
FLAT, SQUARE CROWNS THAT SEAT FIRMLY IN THE FOUNDATION
TINY TUFFER
SIDES PARALLEL
STRIPS EASIER—LESS GRINDING

TUFFER
CARD CLOTHING

HOWARD BROS. MFG. CO.

WORCESTER, MASSACHUSETTS

Southern Plants: Atlanta, Ga., Gastonia, N. C. **Branch Offices:** Philadelphia, Dallas. **Canadian Agents:** Colwool Accessories, Ltd., Toronto 2

LEATHER

APRONS FOR CONVENIENCE

LAWRENCE CHROME

FOR SUPERIOR DRAFTING

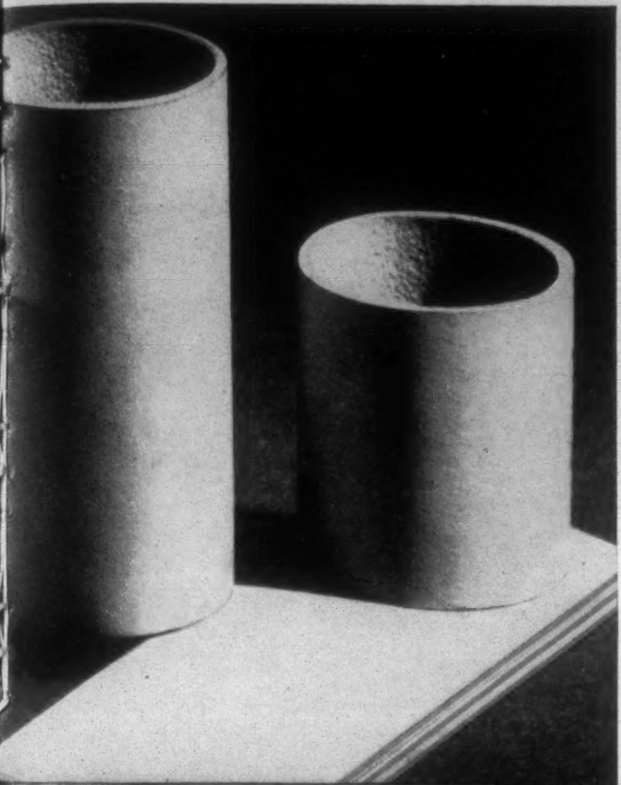
Uniformity pays.

On V-belt drives, when one strand wears out, it is recommended that you install an entirely new set, so all strands will have uniform pulling power.

On winding machines, when requirements change, you are careful to reset all yarn cleaners uniformly, so all spindles will have the same degree of inspection.

Then, why not have your long-draft equipment running on uniform-quality leather aprons *throughout*? Leather is the one material that is furnished open-end—you can install new aprons as needed, even in bottom positions, without delay—and then you'll have *all* spindles running on the *same* material.

And when you decide on leather, decide



on *Lawrence Chrome*—used more on spinning and roving frames than any other type.

Lawrence Chrome gives you the best possible drafting—and *retains* its superior drafting quality for the greatest length of ime. Its smooth, firm, high-friction surace holds the fibres—even the shortest—right in line, for a positive draft. Oily and ummy deposits are absorbed by the leather ores, none being left on the surface to spoil the yarn. And being mineral-tanned, Lawrence Chrome reduces static troubles.

Life is longer, too, because Lawrence Chrome's firmly-knit fibre structure resists brasion and refuses to "bell out" with ressure of the traversing yarn.

Lawrence Chrome is standard with Whitin Machine Works. And apron manuacturers in important textile centers will tell you it gives superior results. Specify Lawrence Chrome for your next aprons.

AWRENCE **CHROME** LEATHERS

1st Choice for Aprons

A. C. LAWRENCE LEATHER COMPANY

EABODY, MASS. GREENVILLE, S. C.

THIS TEST WILL CONVINCE YOU...
SPINNA CALF LAUGHS AT HARD ENDS

Break the roving and piece together with a slight twist. Run the hard end through and then inspect the rolls.

Lively Spinna Calf—triple-resilient*—will spring back into shape, after an ordinary hard end, without a trace of a groove. That property of resiliency . . . plus its long-lasting abrasion-resistant, high-friction top surface . . . are reasons why Spinna Calf stays kind to the yarn for up to 18 months and more in front line positions.

During that lifetime, you'll experience freedom from such nuisances as *eyebrowing*—for Spinna's high-frictional surface carries waste well back on the clearer . . . and *lapping-up*—there are no rough or sticky places to grab the yarn. *Static troubles* are reduced, too, because Spinna Calf is *mineral*-tanned.

So have your roll coverer use Spinna—the leather *he* will like because its quality is uniform.

*1. The individual fibres compress and recover.
2. The fibre network adjusts itself to strain, and recovers.
3. The air in between is expelled, then returns. No other material has all three forms of resiliency plus Spinna Calf's strong wearing surface.

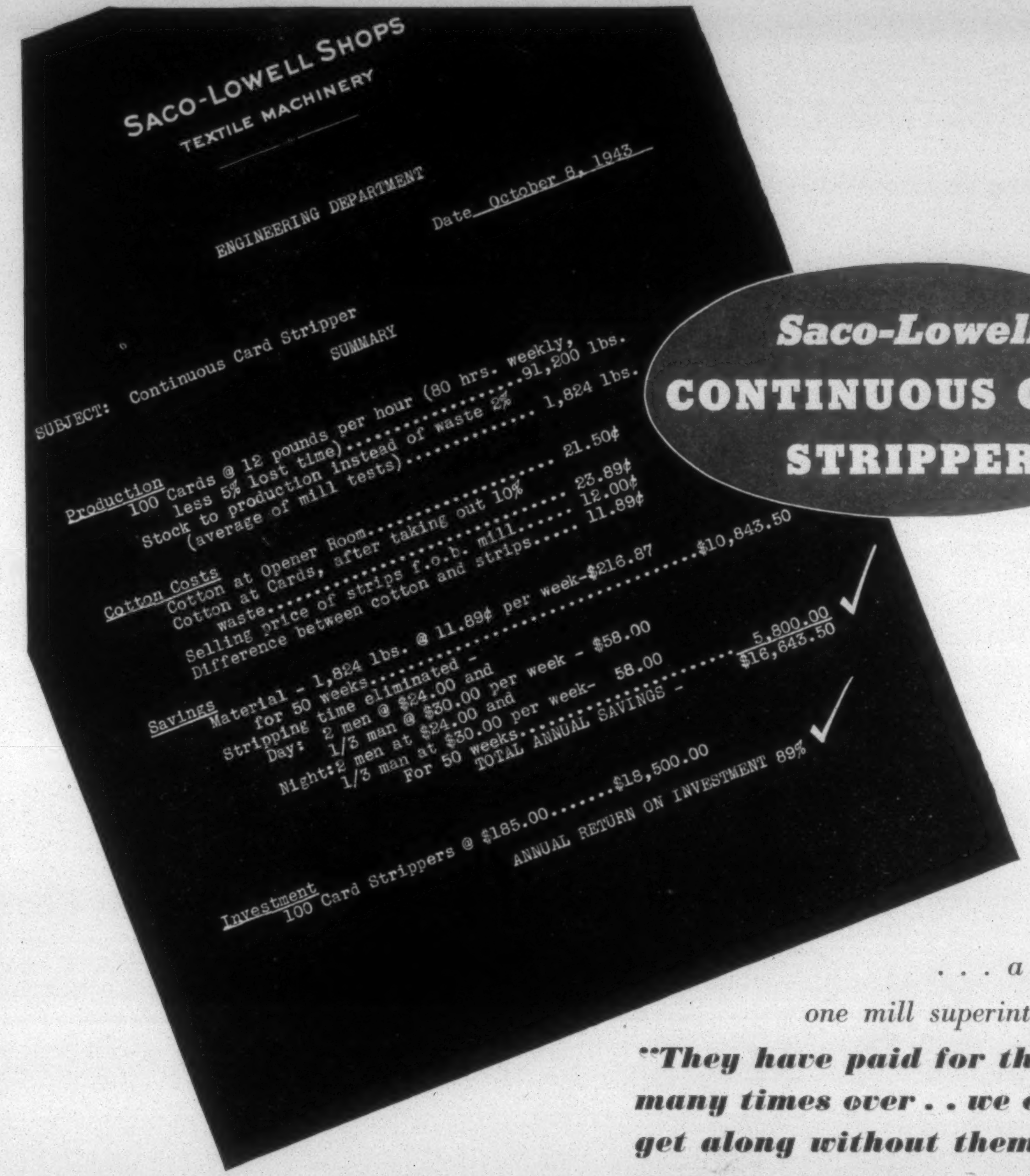
A. C. LAWRENCE LEATHER CO.
RELIABLE LEATHERS
PEABODY MASS.

Lively

SPINNA CALF

ROLL COVERING

it's Triple Resilient



SACO-LOWELL SHOPS
TEXTILE MACHINERY

ENGINEERING DEPARTMENT

Date October 8, 1943

SUBJECT: Continuous Card Stripper

SUMMARY

Production
100 Cards @ 12 pounds per hour (80 hrs. weekly,
less 5% lost time)..................91,200 lbs.
Stock to production instead of waste 2%
(average of mill tests).............. 1,824 lbs.

Cotton Costs
Cotton at Opener Room...................... 21.50¢
Cotton at Cards, after taking out 10%
waste.............................. 23.89¢
Selling price of strips f.o.b. mill...... 12.00¢
Difference between cotton and strips..... 11.89¢

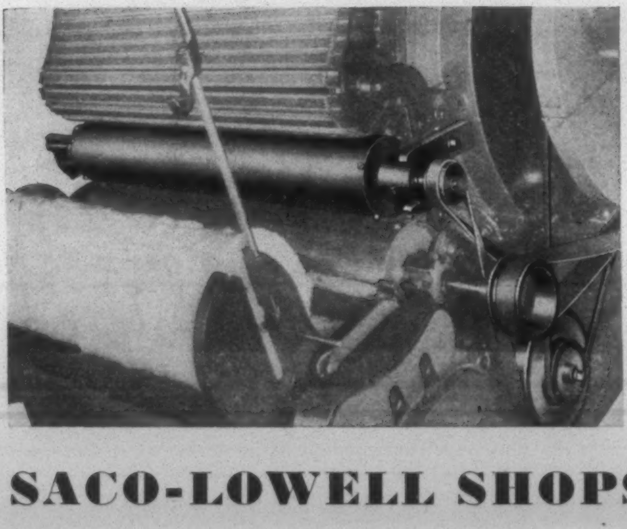
Savings
Material - 1,824 lbs. @ 11.89¢ per week-$216.87
for 50 weeks...............................$10,843.50
Stripping time eliminated -
Day: 2 men @ $24.00 and
1/3 man @ $30.00 per week - $58.00
Night:2 men at $24.00 and
1/3 man at $30.00 per week- 58.00
For 50 weeks.............................. 5,800.00
TOTAL ANNUAL SAVINGS - $16,643.50 ✓

Investment
100 Card Strippers @ $185.00.......$18,500.00
ANNUAL RETURN ON INVESTMENT 89% ✓

Saco-Lowell
CONTINUOUS CARD STRIPPER

. . . a letter from one mill superintendent said

"They have paid for themselves many times over . . we could not get along without them."



This has been the experience of a great many other mills using the Saco-Lowell Continuous Card Stripper. In fact, one mill superintendent after using this ***Cotton Saving and Cost Reducing Assembly*** told us that we had been conservative in presenting our facts to him. This Saco-Lowell Continuous Card Stripper has many practical advantages which can be summarized as follows:

Saving of Cotton
Cleaner Card Room
Increased Production
Saving in Labor Cost
Improvement in Quality of Yarn
Reduction in Power Consumption

The Saco-Lowell Continuous Card Stripper is easily and quickly installed on all Saco-Lowell Cards . . . and in many cases on those of other manufacturers. Descriptive Catalog sent upon request.

SACO-LOWELL SHOPS

60 Batterymarch Street, Boston, Mass.
Charlotte Greenville Atlanta

Universal Atlas Cement Company, Leeds, Ala. *Warren, Knight & Davis, Architects*

CONCRETE

BRICK, MASONRY, OR STEEL FRAME CONSTRUCTION?

That is a matter for YOU to decide after consultation with your engineer or architect. But when your decision has been reached, you will need the services of a contractor competent in all types of industrial construction.

Our organization has been departmentalized to meet this need.

A trained and experienced personnel, with adequate modern mechanized equipment, is your assurance of prompt, efficient and satisfactory service.

EXISTING PLANTS MODERNIZED MAINTENANCE SERVICE FURNISHED
ANYWHERE IN THE SOUTH

DC

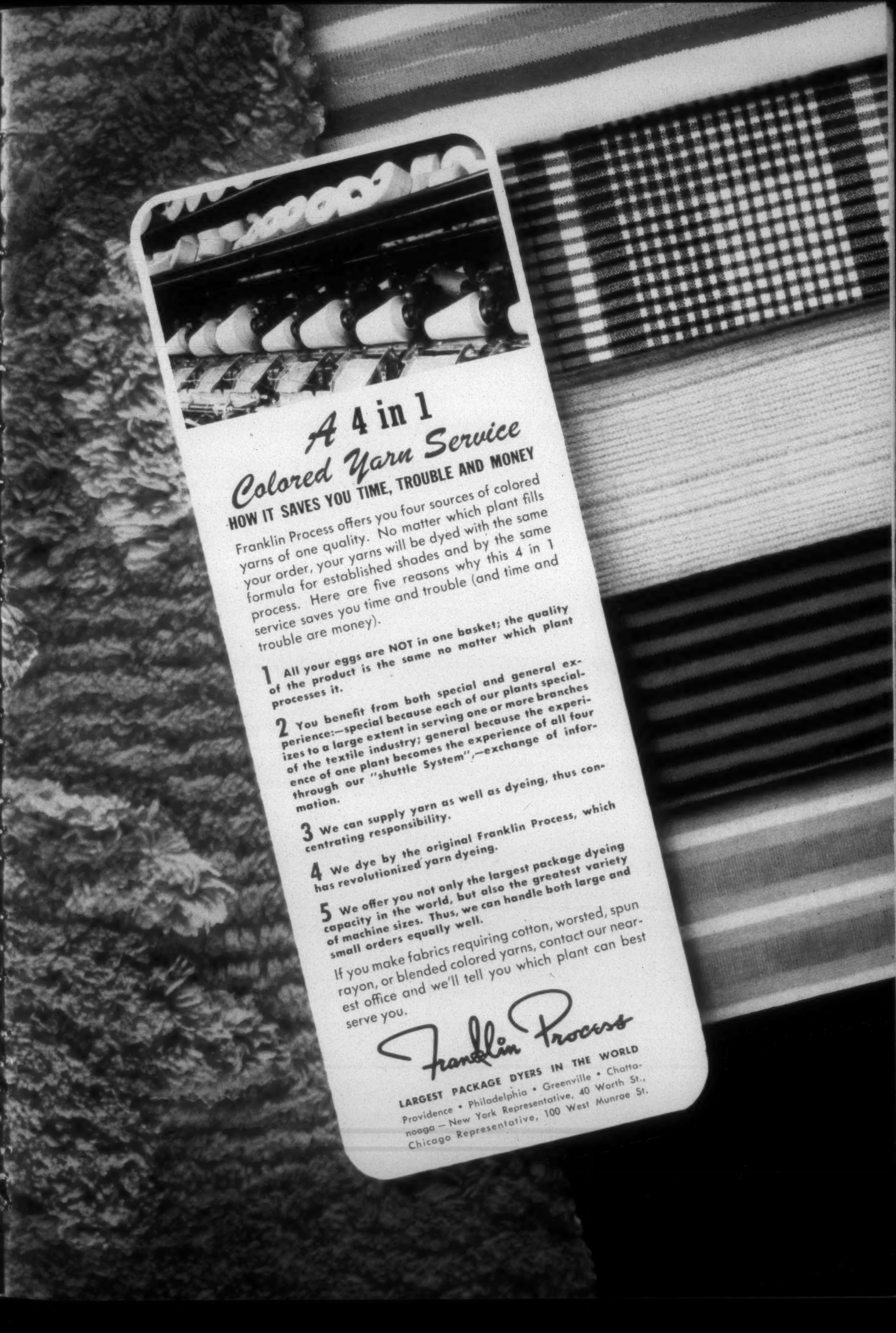
DANIEL CONSTRUCTION COMPANY, INC.

GREENVILLE, S. C. BIRMINGHAM, ALA.

X

If early-type X Model Looms
Running at a speed of 192 Picks
Can weave 40% More Cloth
Than old-type E Models—
And with No More Labor—
What are we to Expect
From the Redesigned X-2 Model
With its still Higher Speed
And Latest Refinements?
That is something
The Post-War Textile Industry
Is Going to Find Out

To X-2



A 4 in 1 Colored Yarn Service

HOW IT SAVES YOU TIME, TROUBLE AND MONEY

Franklin Process offers you four sources of colored yarns of one quality. No matter which plant fills your order, your yarns will be dyed with the same formula for established shades and by the same process. Here are five reasons why this 4 in 1 service saves you time and trouble (and time and trouble are money).

1 All your eggs are NOT in one basket; the quality of the product is the same no matter which plant processes it.

2 You benefit from both special and general experience:—special because each of our plants specializes to a large extent in serving one or more branches of the textile industry; general because the experience of one plant becomes the experience of all four through our "shuttle System",—exchange of information.

3 We can supply yarn as well as dyeing, thus concentrating responsibility.

4 We dye by the original Franklin Process, which has revolutionized yarn dyeing.

5 We offer you not only the largest package dyeing capacity in the world, but also the greatest variety of machine sizes. Thus, we can handle both large and small orders equally well.

If you make fabrics requiring cotton, worsted, spun rayon, or blended colored yarns, contact our nearest office and we'll tell you which plant can best serve you.

Franklin Process

LARGEST PACKAGE DYERS IN THE WORLD

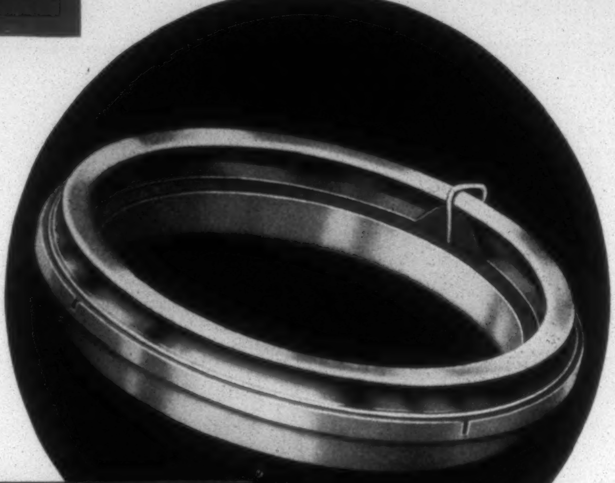
Providence • Philadelphia • Greenville • Chattanooga — New York Representative, 40 Worth St., Chicago Representative, 100 West Munroe St.

Ragan Rings *for* BETTER SPINNING

MADE IN THE SOUTH

GREATER EFFICIENCY PER SPINDLE is the effective answer furnished by Ragan Rings to your twofold problem of increasing production and, at the same time, decreasing your unit *cost* of production.

Installations in hundreds of representative mills (including some of the South's largest) prove that Ragan Rings not only increases spindle efficiency but help to improve the quality of yarns and cord as well.



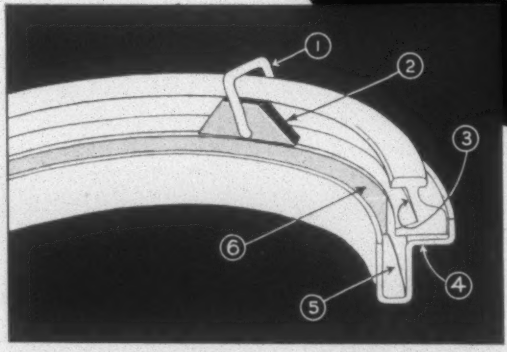
RAGAN TWISTER RINGS

FOR RAYON TIRE CORD

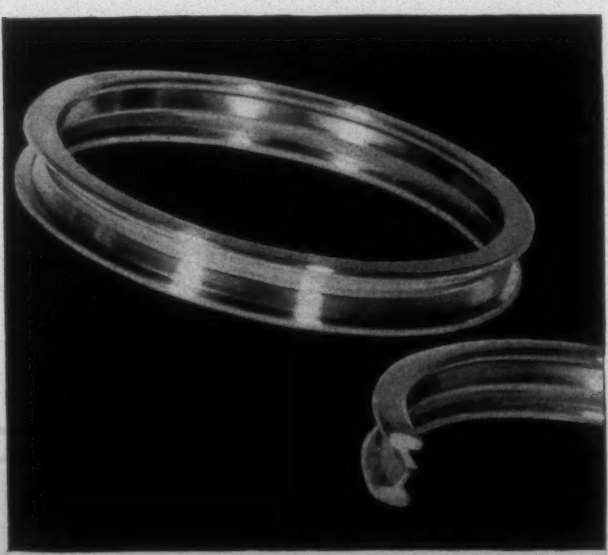
The only complete, self-oiling traveler rings on the market, Ragan Twister Rings are scientifically designed to give long, efficient service at super-high speeds, with a minimum of operator attention.

The specially designed travelers manufactured by us are made in two pieces: a hardened steel thread-hook which affords maximum protection against thread cut; and a composition tailplate, lasting 2½ times as long as bearing bronze, which takes the traveler wear.

As a result of this special construction, the travelers run free from chatter vibration at all speeds and produce a more uniform tension on the yarn as the tangental pull changes. The travelers will not bronze the rings.



1. Hardened steel thread-hook. 2. Best bearing composition tailplate. 3. Ring oiled channel. 4. Twister ring holder. 5. Deep oil reservoir. 6. Oil wick and filter.



RAGAN SPINNING RINGS

Ragan Spinning Rings are used by hundreds of progressive mills and endorsed by them as the most efficient and satisfactory rings obtainable for the production of high-quality yarns, for warp, filling and cut rayon.

The high polish and special design of these rings make your travelers run smoother and last longer, permit higher speeds in many cases, and prevent chattering and uneven tension of travelers and the resultant operator troubles.

EXCLUSIVE FEATURES

Smoother finish, greater resistance to dry abrasive wear, due to improved, patented process of case-hardening. Angled sidewall—eliminates outside point drag, or back-tracking; prevents chatter; produces better face on yarn. Reversible and nonreversible standard flange numbers, to fit all standard holders.

Samples on Request

RAGAN RING CO.
P. O. BOX 174, STATION A
ATLANTA, GEORGIA

TEXTILE BULLETIN

MEMBER AUDIT BUREAU OF CIRCULATIONS

Vol. 66 April 15, 1944 No. 4

Cotton Mill Men—

By HUGH M. COMER

GIVE... PUT OUT... PRODUCE... GET THE POUNDS!

NOW comes, in my life, the end of one of the finest experiences that can happen to a cotton mill man—being president of the American Cotton Manufacturers Association. I didn't have much trouble thinking of a keynote for the speech because the keynote subject is so obvious, the need for production.

But before I get into that part of my talk, which if you don't mind I would like to bring up at its close for the purpose of accent, I would like to go back to the minutes of our first directors' meeting held the first of August, 1943, and see what we were thinking about at that particular time. All committees of the association had been formed earlier in the year. One of the committees was the legislative committee.

We discussed the formation of Earle Stall's big cotton weavers' advisory committee and its break-down into its smaller commodity committees and the proposed function of this committee. It is interesting to note that even at that early date there was doubt as to the real function that this committee would perform. But there was a direct statement from the OPA that no action would be taken by OPA until after consultation with the proper membership of this committee. It will be interesting to you to know that these sub-committees have met often during the year and I really think that the men in the OPA, who have guided the function of these committees, have tried their best to see our position in the questions that have been brought before them. Certainly with the experience that I have had with them, they have shown diligence—no little diligence—in gathering the factual data that pertained to the particular problem at hand.

In the earlier part of the year a committee of national scope had been formed to present to Congress the cotton textile position on renegotiation. This matter was discussed and the discussion led by Bob Henry. And, by the way, Bob Henry has certainly been a friend to this industry all his life and he has certainly been my friend.

A discussion was held by Charlie Cannon on our case known as "Docket No. 28800." Then Billy Banks stated clearly and, according to my viewpoint, correctly the co-operative relationship that the American Association should have with the Cotton-Textile Institute. The subject of the necessity of wage surveys, both state and nation-wide, were discussed. Then we thought about drawing on the textile industry for men to sit on the labor boards, regional and national. We talked about our money—how much money we had and what we were going to do with it. We talked about the scope of our membership and plans were made to increase it. We had a long telegram from Rhea Blake in the National Cotton Council which exemplified the close relationship that exists between our two organizations. We tried to impress on our members the value of becoming associated with the American Farm Bureau Federation in order that we might learn the farmer's viewpoint and he ours in the national economies.

We had a full meeting, as you can see. We set up plans to go before the War Manpower Commission and discuss with them essential jobs in our industry. We counted our friends, which is a good thing for anybody to do once in a while, and among those friends we found the Association of Cotton Textile Merchants in New York.

We discussed then, and we will discuss again, the need of safety and health—not only of ourselves but all those fine people who work within the walls of our mills. I have lived in a cotton mill village for 30 years and I have learned that the people who work in these mills, my neighbors, are a grand lot and are trying just as hard as anybody in the world to make a worthwhile contribution towards the well-being of this grand United States and the things that are in it.

I suggested then, and I suggest now, that this association work closely with the United States Public Health Service and the United States Department of Labor, and the state departments of health and labor, and help us carry messages into the mills and to ourselves that will be beneficial.

Now, if you don't mind, I would like to get specific on these questions. One of the most difficult programs that the association participated in during the year, I think, was the effort that was made to have our industry declared exempt from the statute that required renegotiation of contracts. In the very beginning, when it was discovered that there was such a law—and incidentally it seems that the renegotiation clause became a law before hardly anyone in the industry was aware that such a law was even being contemplated—the renegotiation committee was formed and its members were chosen from the merchants association in New York; the National Cotton Manufacturers Association; the Cotton-Textile Institute and from ourselves. Mr. Russell Fisher of the National Association was selected to be the chairman of the committee and that he was to work closely with Governor Gardner and Fred Morrison—and this was done. You all saw how close industry came towards accomplishing exemption. The clause exempting us was actually written into the Senate finance committee's report. Besides the presentation made by Russell Fisher, presentations were also made before this committee by Bob Henry, Harvey Moore and Scott Russell. We shot our big guns.

Relative to the wage surveys which were made—all states participated in the survey with a large majority of the mills participating. Your own association caused a Southeast-wide survey to be made and these statistics are now on hand and available for the members of the War Labor Board.

You know I promised that I'd give particular attention to the traffic committee, especially Docket No. 28800. This docket has now cost you $15,000. We hope the final hearings were made in Washington the early part of March. I will explain to you what this docket is all about. Approximately 97 per cent of the cotton that the mills draw on from the Southwest comes compressed. Three per cent of the Western cotton comes into the Southeast flat. Surveys that we have caused to be made in the mills indicate that the mills that draw on this flat cotton do so because of the necessity in their manufacturing program that they have to have Western flat cotton—a cotton and package particularly adapted to their needs. The compresses have been trying to force all the Western cotton to be compressed by creating such a spread between the freight rates of flat and compressed cotton that by economy would force all cotton to be compressed. Less than 300,000 bales are involved in the question so it is apparent that there is an ulterior motive in the tremendous fight that the compresses have made and are making to force this small amount of cotton through compression. By way of emphasis, I will say that the increased income to the compresses were this three per cent forced through the compresses would be around $50,000.

Your industry is facing an increase of compressors' charges of a million and a half dollars a year and the fact that this fight has been kept up by your association during the past year has undoubtedly saved our mills that amount of money. The compress folks are not clowns, you know, and they have got folks hired to sit up nights to think about how to put this clip on us.

Most of you are familiar with the component parts of the National Cotton Council, which are the six interests dealing with cotton and those six interests are: the farmer, the ginner, the crusher, the warehousemen and compressors, the shippers and the spinners. Each of these groups contribute in a proportionate manner to the support of the council. The council, as you know, is headed up by Mr. Oscar Johnston. There are many very able men in this staff and these men have been most useful to us in our national activities, and they are being used very closely at this moment in our OPA extension presentation program.

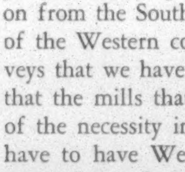
On Dec. 29, 1943, we had a called meeting of the board of directors to consider the matter of calling for assessment of our members because of the necessity of widening the scope of the association's activities. This increased activity to take in the services of legal talent, a representative in Washington, a statistician and an economist. It was contemplated that this activity would cost a given amount of money and, as our budget did not contemplate this extra expenditure we asked the membership to be forthcoming with it. We are happy to tell you that the amount asked for, and more, was subscribed and we appreciate this splendid co-operation. Our retained lawyer has been active, as well as the statistician and economist, also the representative in Washington.

Paying Tribute

We have felt definitely all the year the benefit of the facilities that are owned and operated by the Cotton-Textile Institute. Dr. Murchison, Paul Halstead, Governor Gardner, Fred Morrison, Mr. Murray, Dr. Michl, Mr. Everett and Miss Jewel have all lent themselves no little to the work of the institute to the benefit of the American Association. And Herman Cone, in whom the industry has no better friend or harder working patriot, has done his level best to throw the weight of the institute in the direction and to the benefit of the American Association, and we can only thank him from the bottom of our hearts.

The people who have sold us goods. The shuttle man, the bobbin man, the belting people, the oil people, the people who have sold us castings, pickers, rollers, skewers, brooms, mops and motors—thank you a thousand times—you good merchants, for never having an idle frame, or loom in our mills, and I think that goes for the balance of the mills, too—for the lack of parts. You know an honest cotton man is more or less of a curiosity. There are not many. But there have been enough of them to keep us in cotton—and keep us in the kind of cotton that we wanted—for our own peculiar needs. There has always been some cotton on hand ready to be opened. The trade magazines and the trade papers have done all they could to teach and tell us what is going on. They have opened their columns for suggestions by our workers and by our specialists. And they have gone out and got specalists themselves to teach us new tricks, to teach us short cuts and economies, and they have given up hundreds of linear inches in saying nice things about us and building us up in our public relations—and thank you.

The life of the statute creating OPA ends on April 30, 1944. At our directors' meeting on Feb. 23, a letter written, jointly to Dr. Murchison and me, by Mr. William D.

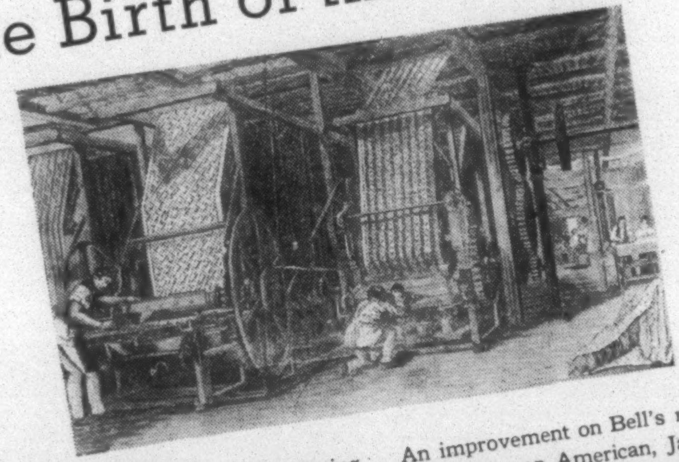


Hugh M. Comer, now the immediate past president of the American Cotton Manufacturers Association, has been what journalists refer to as "good copy." He looked upon his duties as chief of this important group of Southern cotton mill executives not simply as an honor, but more in the light of serious work which must be performed conscientiously. The accompanying article is an abstract of his address delivered before the annual A.C.M.A. convention at Atlanta, Ga., April 12. In the interests of space conservation some of Mr. Comer's remarks are left out, but the editors feel that the accompanying material very adequately summarizes activities of the association during the past year. Other happenings of the convention are reported on pages 36 and 38.

THE ROLE OF CHEMISTRY In the Development of Textiles

NO. 3 OF A SERIES

The Birth of the Roller . . .



Before Thomas Bell's time, all printing had been done by means of wooden blocks or flat plates. In 1775, Bell, a somewhat mysterious Scottish gentleman, perfected the technique of wrapping engraved copper plates around wooden rollers, to make a continuous pattern on cloth. Obviously, the importance of Bell's invention hinged on the quick bleaching which was made possible earlier through the discovery of chlorine.

It is thought that Bell's machine was first used successfully in England by Sir Robert Peel in 1785. Though the first machine had one roller, the idea took hold so well that, by 1870, machines using 20 rollers were in operation both in Great Britain and in the United States.

An improvement on Bell's machine was devised by an American, Jacob Perkins, in the early 1800's. He invented a small steel cylinder to press designs on the copper roller—an economical way of covering it with the pattern and increasing the roller's usefulness. This process was introduced by Lockett in 1808, and is still being used for fine fabrics.

Today, Mr. Bell would feel right at home with our printing machines. Though they have more rollers than his original one, they employ the same principle. By his contribution to mass production, the most important economic trend of our times, it may well be said that Thomas Bell "rolled" his way into history.

BURKART-SCHIER CHEMICAL CO.

Manufacturing Chemists for the Textile Industry. In peace and war, our products are always on the job improving the finish of yarns and fabrics.

CHATTANOOGA, TENNESSEE

BURK-SCHIER

PENETRANTS DETERGENTS SOFTENERS REPELLENTS FINISHES

Anderson relative to the Vinson directive and OPA prices, particularly with reference to the extension of OPA, was turned over to Mr. Herman Cone, the chairman of our legislative committee, who is in turn the chairman of the increased production committee. All the members of the legislative committee were consulted as to their opinion of the make-up of the committee that should handle the program of the OPA extension for the textile industry. It was agreed that the best group to handle this matter was the increased production committee, the formation of which I will explain later because this committee was made up of members not only of the American Association but of the National Cotton Manufacturers Association as well as members of the institute. Herman Cone is the chairman of this committee and the committee has been in session several times in Washington and in New York and plans are being made to appear before the Senate banking committee, at which time our story will be told. I don't think this talk is the proper place for a statement of our position in the matter. However, I think it is entirely in order that I state one phase of our position and that is we wish to provide that the act as amended shall terminate on June 30, 1945. Ample opportunity will be afforded before this date arrives to discuss further extension of this termination date. However, I would like to read into the record the following statement:

> Prices act as the normal governor of a free economy: determining what shall be produced and in what quantities. But a wartime economy is not free, and price control may perform a useful function during a period of war.
>
> However, the basic purpose of price control must always be to minimize maladjustments and inequities: and any type of price control which increases rather than diminishes them, defeats its own ends. Maladjustments in the economy restrict and limit production, and herein lies the basic danger of any system of arbitrary price control. A program of price control should provide a brake upon runaway prices, and at the same time provide a stimulus to production of civilian goods of the kind required and in the greatest volume that a war economy will permit. In accomplishing those ends it should preserve the advantages of business practices and relationships developed under free and competitive conditions.
>
> Congress has recognized this principle in writing the original Emergency Price Control Act, in which it provided specifically: "The powers created in this section shall not be used or made to operate to compel changes in the business practices, cost practices or methods, or means or aids to distribution, established in any industry."
>
> In its actual operation, the Price Control Act has been subject to a wide degree of administrative discretion under which this expressed objective of Congress has too frequently been overlooked.

It is our purpose to bring our viewpoint vigorously before all people concerned.

Before I leave our year's work I would like to deal with a subject that has been under discussion much in the past year, and deals definitely in the future—and that is the question of research. The American Association has taken no part in a research program except to decide, as an association, not to engage in research. However, our board of governors and members have lent their attention no little to those people who are definitely research minded. So I think during the past year there has been a quickened and lively interest obtained in our industry.

We have certainly got to bring pressure to bear on ourselves and on our machinery builders so they will make our machinery produce more pounds. I heard a man the other day use the expression that "what we needed was a loom—

(*Continued on Page 60*)

48-Hour Work Week Becomes Effective May 14

The minimum wartime work week of 48 hours for the cotton textile industry, established by the War Manpower Commission, goes into effect May 14, 1944. However, the effect of this order will not be as widespread as it was thought at one time, since the 48-hour schedule will be generally applicable only to mills which can make use of it in a practical manner.

For the purposes of this designation the cotton textile industry includes the manufacturing or processing of the following products containing more than 50 per cent by weight of cotton or cotton waste or a combination of the two: (a) woven fabrics of 12 inches in width, whether gray, original mill or regular finish, bleached, dyed or printed, and bedsheets, pillow cases, blankets (but only if containing less than 25 per cent wool), towels, diapers, face cloths and table "linen"; (b) yarns, whether gray, bleached, colored, mercerized, glazed, polished, single, plied or cable, including threads, twines and cordage (e.g., tying, sail, seine, etc., twine, rope, sash cord, etc.), and including any of the foregoing which may be spun on speeder, ring or converted twister spindles.

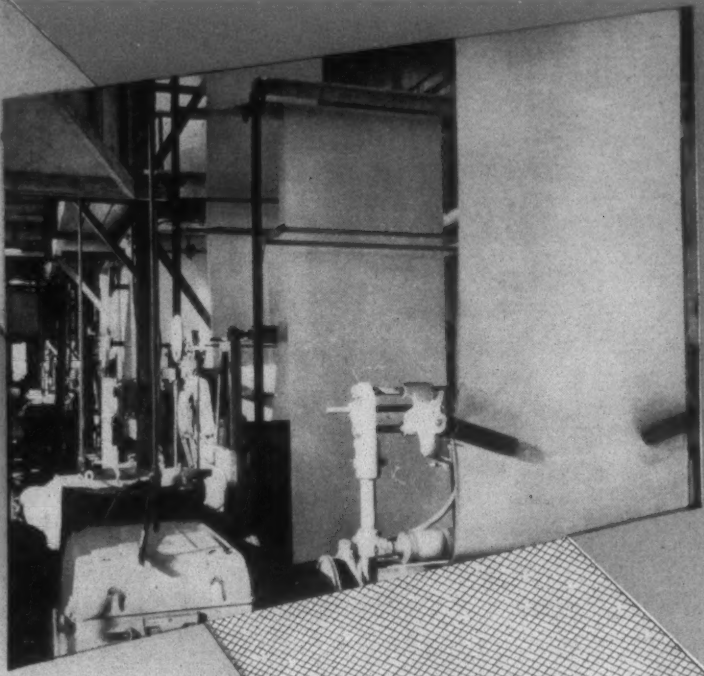
For the purpose of this designation a worker shall be deemed engaged in the cotton textile industry if (a) he is employed in a mill in which any portion of the industry is carried on, and (b) he devotes more than half of his time to work (including maintenance, service, production, clerical or administrative work) in connection with the cotton textile industry.

Not later than the effective date each employer employing workers engaged in the cotton textile industry shall (a) extend to a minimum wartime work week of 48 hours the work week of any such worker whose work week can be so extended without involving the release of any worker; (b) if extension of the work week for any such worker to a minimum wartime work week of 48 hours would involve the release of any worker, submit to the area manpower director the number and occupational classification of the worker whose release would be involved, together with proposed schedule for his release and thereafter extend such work week when and as directed in schedules authorized by the War Manpower Commission; (c) file an application for a minimum wartime work week of less than 48 hours for those workers engaged in the cotton textile industry whose employment in which the employer claims that a work week of 48 hours would be impossible in view of the nature of operation, would not contribute to the reduction of labor requirements or would conflict with any law or regulation limiting hours of work.

DUPONT *CONTINUOUS* PEROXIDE BLEACH

MAKES UNIFORMS UNIFORM

. . . and speeds up production



THE IMPORTANT THING about making cloth for uniforms is to be sure that the fabric can be dyed evenly . . . and yet keep up with wartime production.

Du Pont offers for this job—Continuous Peroxide Bleach. This is the bleaching process that fits your production line schedule—and cuts the usual bleach of eight or fourteen hours to only *two hours*. Developed after long research by Du Pont engineers, it has now been proved practical by the success of installations in leading mills.

Uniformity is achieved by treating every yard of the material—as it flows through the continuous process—exactly alike. And by controlling such factors as time, speed, temperature, steam, absorption of caustic and peroxide.

Another problem in bleaching Army fabrics is keeping rejects and seconds as low as possible. Continuous peroxide bleach solves this through proper control of each step in the process.

Economical advantages include substantial savings on steam, water, chemicals. Changes from one fabric to another require only a simple adjustment.

Necessary equipment for the Continuous Peroxide Bleach is built by recognized manufacturers of textile finishing machinery, using Du Pont patented features. For information on the use of peroxides in continuous bleaching, write E. I. du Pont de Nemours & Co. (Inc.), Electrochemicals Dept., Wilmington, Delaware.

✓ THESE FEATURES

TWO-HOUR BLEACH	HIGH QUALITY
ECONOMICAL	UNIFORM BLEACH
FLEXIBLE	EASY CONTROL

MINIMUM SECONDS AND REJECTS

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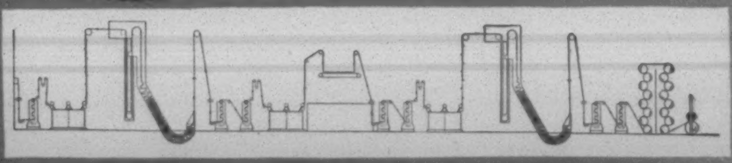
DU PONT PEROXIDES

Better Things for Better Living . . . Through Chemistry



Members of South Carolina Division Exchange Weaving Information

NUMEROUS and timely matters relative to weaving were discussed last month by the more than 100 textile mill operating executives who attended the spring session of the Southern Textile Association's South Carolina division at Spartanburg. W. W. Splawn of the Kendall Co. plant at Pelzer, chairman of the division, presided. Frank D. Lockman, Jr., assistant superintendent of the Brandon Corp. plant at Woodruff, led the discussion. Thomas Henderson of Spartanburg, salesman and service engineer for the Draper Corp., was one of the chief speakers on the various questions brought up. Selected parts of the discussion follow:

CHAIRMAN SPLAWN: We are fortunate this morning to have present the Draper Corp.'s chief service engineer, who might give us a few points on loom maintenance, etc., and who will probably be ready with answers to almost any questions you gentlemen have on looms. I present Mr. Thomas Henderson of the Draper Corp.

MR. HENDERSON: You might like to know what the Draper Corp.'s plans are for the post-war future. We are rather like the automobile industry. All our key men, our pattern makers, etc., have been tied up by the Federal government for the last two years and are not released for anything except an emergency, where looms are tied up. So immediately after the war the looms will be where they started, the X-E, X-L, etc. Beyond that we shall have to wait for future developments.

MR. LOCKMAN: The first two questions are on slashing. The first is: "Using 30/1 yarn on slashers, what is considered a good percentage of soft waste? Of hard waste?" Who keeps an accurate record on that?

O. A. MACE, overseer weaving, Spartan Mills: There are some indications of a saving here for which putting new bearings on the creel is responsible. At one time I had as high as four or five pounds of waste per set; now we have gotten it down to 13 or 14 or 15 ounces. That is so good it is hard to believe.

CHAIRMAN LOCKMAN: Would you mind telling us what type of bearings you put on?

MR. MACE: Well, we had the type that had the sleeve on it, and we put in the type which did away with the sleeve and substituted bronze. We just laid the bearing in there in a journal, and it ran free. We hold that responsible for the saving.

QUESTION: Did you also put a nut in there?

MR. MACE: Oh, yes, we put a fibre nut in there.

QUESTION: Mr. Mace, was that 13 ounces on 11 beams or eight beams?

MR. MACE: Eleven beams. That is what makes it so hard to believe.

J. M. CAUGHMAN, superintendent, Spartan Mills: I know Mr. Mace was hesitant to speak about this. Unfortunately, we do not have the waste percentages for the soft waste at that particular point, because all of our soft waste is lumped together. I can describe it in this way, by what is accomplished. This old thing of the back beam always having yarn left on it is all done away with. I think all of us have had ideas about running less yarn on the back beam, and so on.

It is hard to believe that the waste would be 13 ounces with an 11-beam set. I did not believe it the first time nor the second time, nor until we actually went over it and got it off. But I can say that yarn is not on there any more on the back beam. What percentage the waste is I do not know.

MR. LOCKMAN: You are running the same yardage on the back beam?

MR. CAUGHMAN: That is right. I think it is going to be rather hard to get the percentage of soft waste, because I believe it is more or less standard practice to lump all the soft waste together. I do not believe we are going to be able to get the percentage of soft waste at the slasher.

MR. LOCKMAN: You keep your slasher waste separate, though, don't you?

MR. CAUGHMAN: Yes. But the only way we can get at the percentage of soft waste is all of the soft waste coming from the spoolers and everything.

MR. LOCKMAN: But your 13 ounces is actually from one set?

MR. CAUGHMAN: That is right.

MR. LOCKMAN: Are you running a brake of any description?

MR. CAUGHMAN: One rope around the back beam, very light weight.

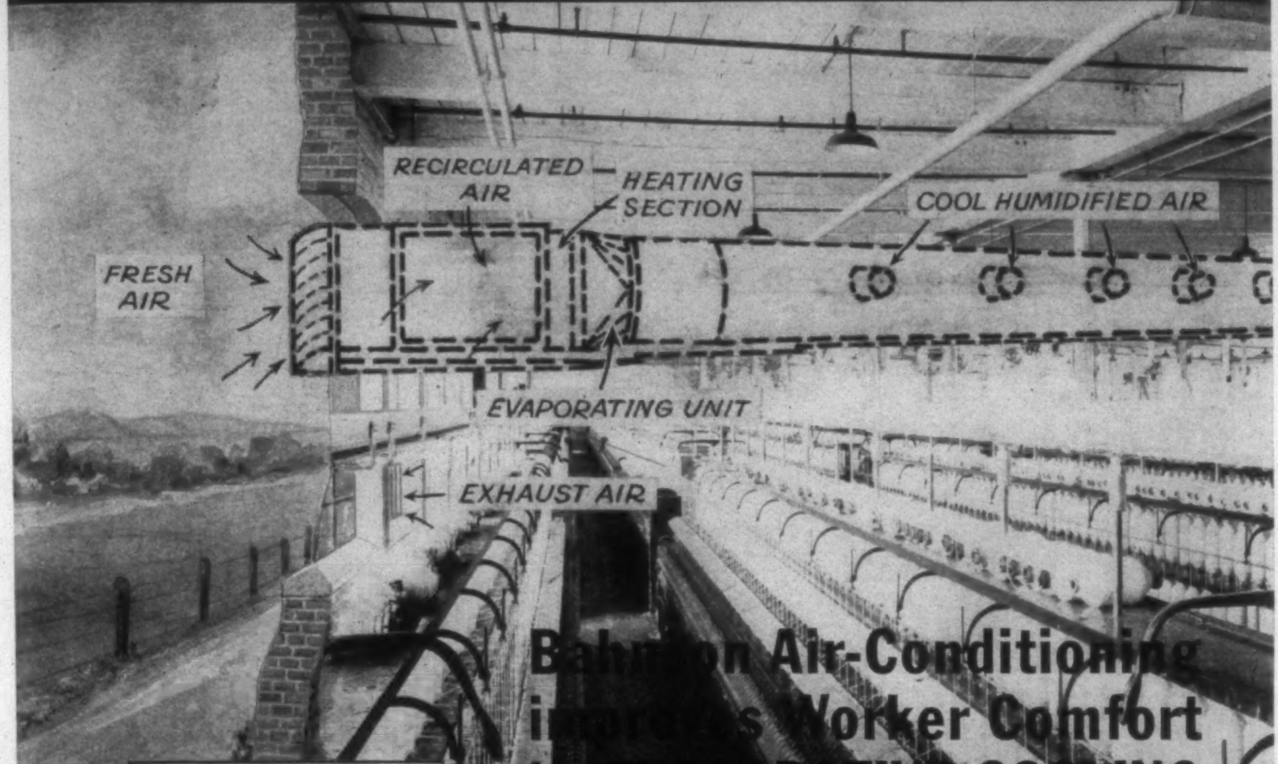
MR. LOCKMAN: That is the only braking apparatus you have on it?

MR. CAUGHMAN: Yes.

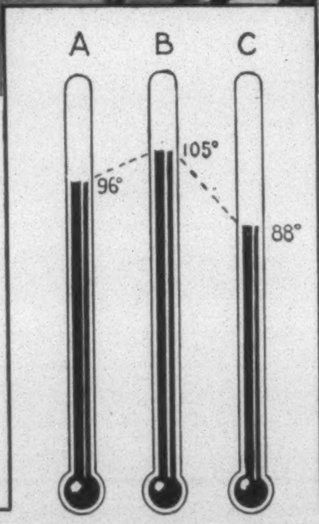
MR. MACE: The big problem is to train the back tender.

JOE C. COBB, president of Southern Textile Association, and vice-president and superintendent of Startex Mills,

Is Your Mill HOT – ?



Bahnson Air-Conditioning improves Worker Comfort by EVAPORATIVE COOLING



The above thermometers illustrate a hypothetical condition to show temperature ranges on a hot day.

A—OUTSIDE TEMPERATURE.

B—NORMAL TEMPERATURE INSIDE MILL WITHOUT AIR-CONDITIONING.

C—INSIDE TEMPERATURE WITH BAHNSON AIR-CONDITIONING.

Your hot weather problems in textile mills can be solved economically and satisfactorily by Bahnson Air-Conditioning Systems—whether they require refrigeration or the more economical evaporative cooling and ventilation. The Bahnson HUMIDUCT and AIR VITALIZER have the advantage of *flexibility* in their functions which incorporate not only positive humidity control, but air cleaning and heating as well as evaporative cooling.

Flexibility with these unit systems means that the system can be easily altered or extended in accordance with rapid war time changes. Whole systems can be economically moved to new locations in the postwar period.

For the sake of your worker comfort and operating efficiency, consult our Engineering Department for the air-conditioning best suited to your plant.

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Tucapau: I might add, in order to help you a little bit, possibly, on that back beam, that if you put on an extension of the lever that starts and stops the slasher to the back beam and have an extension from that starting-and-stopping lever and put a spring in there to hold the weight, so that you can keep your back beam from slackening when you go to put on and pull off, that spring will put a little more weight on the back beam, and you will not have so much waste on there. I think Mr. Mace's idea is splendid and I am going to put it in effect myself, because he is doing a fine job.

MR. LOCKMAN: Suppose we go on to the next part of that question—what percentage of hard waste?

S. G. MAYFIELD, overseer weaving, Clinton Cotton Mills: I do not know what our percentage is, but in my experience on a ten-beam set we get about three pounds of hard waste.

MR. LOCKMAN: When your set is out, are you running through and making hard waste rather than soft waste?

MR. MAYFIELD: No, sir. We run as far as the beam will run and make good work.

MR. LOCKMAN: That has a good deal of bearing on this. Where you make a lot of hard waste you should make as much soft waste. Where you make soft waste you should make as much hard waste, because you run it through.

QUESTION: Why run it through?

MR. LOCKMAN: Well, because we get more for the hard waste than we do for the soft waste.

MR. MACE: Aren't we getting more hard waste than we did before—say two years ago—because of the quality of the help we get? That is in the operation of the slashers. Don't we make more hard waste there than we did? I found that so in my case.

MR. LOCKMAN: The next question is: "Has anyone tried increasing yarn contact on cylinders to increase slasher speed? What was the result?" I would judge by that there is what we call an extra carrying roll, I would think to hold the yarn to the cylinder for a greater length of time. Is there someone here who has tried this extra roll on the slashers?

J. D. BOYCE, superintendent, Mayfair Mill, Arcadia: I have tried this extra roll, but not at the mill where I am now. You could increase your speed, and you also increased your stretch. That was my experience. It increased the stretch considerably over the old type; I would say one per cent or 1.25 per cent over the other type. You could increase your speed, but you could do that on the old. You can slash just as fast as you want to. You can get it from the section beam to the loom beam just as fast as you want to. The question is getting it off that loom beam into the cloth.

MR. LOCKMAN: As fast as you want to?

MR. BOYCE: Yes, sir.

MR. LOCKMAN: What yarn?

MR. BOYCE: 22/s.

MR. MACE: We had that slasher you are speaking of at first on positive drive. I took one positive drive off, just for a test, and found without it we have less stretch than we did. I do not have the figures, but it is something like 1.78 and 1.60.

C. A. MCABEE, assistant superintendent, Pacific Mills, Richland Plant, Columbia: We have two forms, infra-red electric drying and what we call red ray gas. The latter has decreased our speed on our slashers from 20 to 25 per cent, and we believe it is going to work out very satisfactorily. The effect on weaving is good. It has also increased our stretch. We get good drying at the cylinders and it has helped increase our stretch. I think this is the first installation in the South of this kind. It is in the experimental stage, but we believe there are possibilities in it.

MR. LOCKMAN: We have one more man over here that has this installation. Is there anything you can give us on that not already covered?

S. T. SNODDY, superintendent of weaving and slashing, Ware Shoals Mfg. Co.: We have one slash room and are running 19 sets. We were running about 42 yards a minute when we put on the infra-red rays, and we have stepped our speed up to about 50 yards a minute. The effect on the weaving is good. We have not shown any difference in our stretch. We are running about 1.5 per cent.

MR. MCABEE: We are wondering now whether the cost of this gas is worth what we are getting out of it. We have no figures on it. As I said, this was the first installation in this section, I think. The valve is a Selanoid valve, and there is another valve. If they stick it just burns your set off. We have this gas nine inches from the yarn and numerous times have had it burn the set off the slasher. We have a slasher foreman, however, who has an idea about how to remedy it, and the engineers are working on it, and I think it will be worked out satisfactorily. A lot of men are working on it.

A MEMBER: I should like to ask if the percentage of immersion of the yarn is increased. In speeding up your slasher do you get the same penetration of size, and have you made any change in your size formula to get that penetration and keep the same quality in your weaving?

MR. MCABEE: We are getting the same immersion. We did see some decrease in the size penetration, but we figured it was our trouble and went to work to prepare it better and now are getting the same penetration. We found our trouble was in preparing it.

MR. LOCKMAN: How about the shed in the weave room?

MR. MCABEE: It is somewhat better. But I cannot say that is due to the infra-red rays, because we have done a lot of other things.

MR. LOCKMAN: In other words, you improved your size formula?

MR. MCABEE: Yes. We went to work on everything, to get the bugs out of it.

MR. LOCKMAN: Did you change your formula, Mr. Snoddy?

MR. SNODDY: No.

MR. LOCKMAN: If it sheds less it should have penetrated. I think that is right. When it coats your yarn it sheds more, doesn't it? We had better get on with the weaving discussion. The first question is: "What is the difference in filling breaks and refills in changing to a longer quill?"

MR. HENDERSON: I have no figures but I have an opinion as to where the dividing line should be. I believe with 40/s filling and finer we should never try to run from a filling bobbin longer than eight inches. I believe coarser than 40/s can be run from an 8¾ bobbin.

GEORGE W. MCCALL, overseer weaving, Pelzer Mills: I have had some experience in running longer quills, and they were very unsatisfactory. The Draper Corp. is still working on it. It did not work out very satisfactorily.

MR. LOCKMAN: What were your percentages of difference?

MR. MCCALL: I cannot tell you that, because we started when the looms were installed.

MR. MCABEE: I cut my teeth on an 8¾-inch bobbin, but I think you will find your filling breaks will be higher. In a lot of cases, though, it is due to a cracked shuttle or something else. We are going to keep that 8¾-inch quill, and we are trying to work out the difficulties. We have X and X-2 model looms and are running 150 wide drill, 172 and 186, on 10/s filling.

MR. MAYFIELD: We have an 8¾ length quill on E model looms and run 35/s to 46/s filling. We get along well with it. The main point is the fixing. You have to give your shuttle springs a lot of attention. By giving it a little extra attention we are getting along finely with an 8¾ quill. As I said, we run from 35/s to about 46/s filling.

MR. LOCKMAN: What speed?

MR. MAYFIELD: 160.

MR. MACE: I should like to say we have an 8¾ bobbin, and ours is about eight per cent. It is not altogether the bobbins. There are other things that enter in.

QUESTION: Mr. Henderson put a limitation on the filling numbers to run on the long quill. Is there any limitation on the loom width? I have an idea that with a wider loom there is more pull on the filling.

MR. HENDERSON: Well, you have. But a lot of filling breakage is caused by cracked bobbins and also by antiballooning methods. When you use the finer numbers that method will tend to break the filling. That was my idea in dividing the numbers.

QUESTION: Has anyone experimented with the lay of the yarn?

MR. MCABEE: We have, and we find that the taper is a big factor.

QUESTION: What did you do?

MR. MCABEE: We lengthened it. For the 8¾ inches we run a longer taper than on the eight inches.

QUESTION: About what?

MR. MCABEE: About 2¼, I think.

MR. COBB: Do you sacrifice any yarn on the bobbin by doing that?

MR. MCABEE: No, sir.

MARSHALL DILLING, executive secretary, Southern Textile Association: I was told recently that one post-war device that will come out will be in rewinding your filling, running on larger rings than we run on filling frames, with a larger bobbin, then rewind that so you can increase the amount on your quill maybe 50 per cent. I do not know to what extent that has come in, but I am told it will come in. I did not know how many of the men here are doing that, or whether any are, but it might be a good question to ask.

CARL H. COX, overseer spinning, Startex Mills: We did that and got 18 per cent increase.

MR. MCABEE: We are going into that in a small way. We have not increased our package on the spinning frames, as this gentleman said, but we are putting it on the spinning bobbin and running it on the cheese, and Whitin tells us we could get ten to 15 per cent more yarn on the bobbin. In other words, we are getting more yards off our spinning

Among those present March 18 in the Cleveland Hotel, Spartanburg, for the S. T. A. South Carolina divisional meeting.

frame than we can put on that bobbin with the winder.

Mr. Lockman: "What is the best method of loom inspection for overseers and assistant overseers?"

This, I judge, would be periodic loom inspection—once a week, once a month, or once a day, however often you make it. Someone who is doing that tell us what he does. Mr. Kay?

Claude T. Kay, overseer weaving, Pelzer Mills: I don't know whether you can say which is the best method of inspection for overseers and assistant overseers or not, because it covers a little bit more. I think when you go into that you get into the personnel problem along with your maintenance and inspection. We find it is good to have periodic inspection of the machine. Assistant overseers and overseers do not have the time now that they did have to make inspections, because they are doing more work as instructors than they are as overseers. A mill is a sort of school now; they have a lot of learners and have a lot of work to do with them. Most times when you start your inspection on maintenance you have to spread it out over a period of time. The frequency of inspection should be governed by the way your machines work. Some parts have to be inspected more often than others.

I think it is a good policy to inspect your loom alignment when you put in new shuttles. I think you should have a card and that all concerned should get the card and check on it. Then you can check the wear on your moving parts at different intervals. But I think the best method for that kind of inspection is where you have regular maintenance inspection, use the card system and have a time for inspecting each part or parts, then turn the card over to the overseer, second hand, or assistant overseer. Then they are responsible for the running of the third of the looms which are designated to each shift. Keep right up with it and see that your loom fixers are getting to the looms and keeping them in repair.

W. M. Allison, assistant superintendent, Startex Mills: I should like to ask Mr. Kay what he has on that card he gives to the loom fixer with the new shuttle.

Mr. Kay: All parts that have anything to do with the shuttle are checked. They are to be checked by the assistant overseer and overseer.

Mr. Boyce: We have a card that we have checked. They check on the picking motion and the protection motion, the let-off motion, the battery and transfer motion, and tighten up the loom generally. This is done when the warp is off, at the changing of the warp. This card is put on the loom when the warp is off, and that is checked. Tightening up the loom, in my opinion, is the most essential. If it is tightened up well and the motions are checked it will go until that warp is out, without any serious trouble. I do not mean, now, to say we are not having some serious trouble.

Mr. Lockman: Who checks on this?

Mr. Boyce: The second hand.

Mr. Lockman: Your fixer does the work, and the second hand checks it?

Mr. Boyce: The second hand puts the card on the loom when the warp is out, and the section man does this. He checks it.

Mr. Lockman: "In using gauges on the lay and battery what difficulties have you experienced?" Who is using those gauges? Anyone here?

Mr. Mace: We at this time are substituting some lock batteries. Of course you know what I mean. They give you a lot of trouble. We put on the No. 21, and we are using those gauges. We have not run into difficulty; we think they are all right—much better than the old type.

Mr. Henderson: Mr. Chairman, the first thing for a fixer to get in his head when using battery gauges is that the battery is gauged to the lay. So first see that the lay is gauged properly. He should have a lay gauge, which he should use first. If he does that he will have no trouble.

Mr. McAbee: When I was a fixer I used a gauge. I do not think we shall have perfect conditions until all three

(*Continued on Page 55*)

Wigington Will Address Gaston County Division

The Gaston County division of the Southern Textile Association will hold its spring meeting at 7:30 p. m. April 21 in the headquarters building of the Boy Scouts of America, corner Fourth and South Streets, Gastonia, N. C. John T. Wigington of Clemson, S. C., will be the chief speaker at this meeting.

Mr. Wigington, who is director of the division of technical service, Cotton-Textile Institute, Inc., and also secretary of the Industrial Fiber Society, will speak on current research activities in the textile industry and their relation to the post-war period.

The speaker is qualified to discuss any subject relative to textile manufacturing. He is a graduate of the textile school at Celmson College, and has had much practical experience—having been associated with several mills as head of various departments. He was at one time superintendent of Edna Mills Corp. at Reidsville, N. C. He has gathered much data on grades of cotton and the effect of various machine speeds on the production of fine yarns. He has prepared a number of charts to illustrate his findings, and these will no doubt be of special interest to the superintendents, overseers and other operating executives in attendance.

H. Gilmer Winget, chairman of the Gaston County division, has urged all textile mill operating executives in the Gastonia are to be present, whether members of the association or not.

SEVEN-LEAGUE BOOTS

SEVEN LEAGUE BOOTS have been donned by this nation's dyers and dyestuffs makers since we entered the war. Speed and production became the order of the day. Under the pressure of war we've greatly increased production of Ponsol dyes for military requirements . . . helped develop speedier, more economical methods of application.

During this period, it should be mutually helpful for us to work together. Our laboratories can help you solve your *wartime* technical problems. And we may, in addition, gain the experience and knowledge which will guide us in advance, to profitable solutions of *tomorrow's* problems. E. I. du Pont de Nemours & Co. (Inc.), Organic Chemicals Department, Dyestuffs Division, Wilmington, Delaware.

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BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

Lessons in Fabric Analysis

By THOMAS NELSON, Dean Emeritus of the Textile School,
North Carolina State College, Raleigh

Last month Dr. Nelson completed his series on the construction of various weaves, entitled "Practical Textile Designing." This series was composed of 30 installments which dealt with both simple and complex weaves. Any capable textile designer must be well versed in fabric analysis, and the author will develop this subject in the form of appendices to "Practical Textile Designing."

FABRIC analysis is a term used when a sample of cloth is to be reproduced, and is often classed as designing. In fact, in many mills, there is no designing whatever; all that is done is simply the reproduction of fabrics from a sample, or, in other words, analysis of the sample so that it can be reproduced in the fabric. This is often a tedious process, and extreme care is required so as to reproduce the fabric correctly. To reproduce a fabric, the weave, counts, size, number or denier of warp and filling, colors of threads and other requirements will have to be ascertained. These requirements can be enumerated as follows:

(1) Which are the warp threads and which are the filling threads? (2) Of what material do they consist? (3) Counts, size, number or denier of warp and filling. (4) Sley and pick. (5) Threads or dents per inch in cloth. (6) Threads or dents in pattern. (7) Dents over all. (8) Reed number. (9) Threads in pattern. (10) Patterns in warp. (11) Threads in warp. (12) Shrinkage in warp and filling. (13) Weight of one yard of cloth. (14) Yards per pound. (15) Design. (16) Drawing-in draft. (17) Chain plan.

In reviewing these requirements, it must be understood that all the 17 items given are not necessary in order to reproduce every individual piece of cloth. For example, to reproduce a plain fabric, about half of the requirements given are not called for. If a fancy fabric had to be reproduced, more of these requirements would be used. The above list is intended for any fabric, whether it be plain or fancy; and in order to make these requirements as simple as possible, each will be taken separately and explained.

Warp and filling threads—Several suggestions can be made which will be of assistance in determining which are warp threads and which are filling threads. (A) If there is a piece of selvage on sample, the warp threads are readily determined, because selvage threads are always warp threads. (B) Reed marks of any kind will indicate which are the warp threads. A reed mark is caused by a wire in the reed being bent, and this causes the threads to be separated at that point. A mark is left in the cloth, and the threads which run alongside must therefore be the warp threads.

Reed marks are also made all across the fabric, and not merely in one particular place. Such a fabric is known as a "bare" or "reedy" cloth. The wires in the reed cause the marks which divide every two threads, and thus the threads run in pairs. The warp in this case is easily seen. (C) If one set of threads are twisted harder than the other, the hardest twist is almost invariably the warp. The warp threads are generally the smoothest and strongest. This is one of the best tests that can be made. The filling does not need to be twisted as hard as the warp, because it is required to give a soft feel to the cloth, and also there is not the same amount of friction in laying the filling threads in the cloth as there is in laying the warp threads. It is necessary to have the warp threads twisted harder than the filling, because of the friction which is caused by the opening of the threads to form the shed, the backward and forward movement of the reed, and the beating up of the filling. The warp is also smoothest, because a size—a mixture of suitable ingredients, such as starch, flour, tallow, etc., is pressed into the yarn to assist the weaving.

Material—In determining the material in a fabric, skill is necessary; that is to say, the person who is making the analysis should have some knowledge of the different fibers which are made into fabrics. At least it is necessary to be able to distinguish between cotton, rayon, silk, wool, worsted or aralac. To those who are not acquainted with the difference between these yarns it would be advisable to obtain samples of each and make comparisons.

Fabrics made from mixed fibers and yarns require the making of chemical tests in order to determine the kind of yarns used and the quantity of each material in the yarns. For example, take a fabric consisting of wool and cotton. One test is as follows: weigh the sample, then boil the sample for five minutes in a five per cent solution of caustic soda. All the wool will have been dissolved. The percentage of wool and cotton in the sample can be ascertained by first drying and then weighing the cotton that is left. The difference between the weight of the sample before the test and the weight of cotton left after being dried will give the per cent of each.

Count, size and denier—The count or number as in cotton, size as in wool and worsted, or denier as in rayon, is determined in two ways, either by weighing or as in cotton yarns by comparison. In weighing a pair of fine grain scales are used. A certain number of inches of warp and filling are taken from the sample and each weighed separately. From these weights the counts, size, number or denier are obtained. A three or four-inch die is often used. This die will cut exactly the correct amount of cloth from the sample. The threads and picks are taken apart separately and measured. Often 100 inches of each yarn is measured and weighed and from this weight the result is obtained. Example: 100 inches of cotton warp yarn is taken from sample and weighs .827 of a grain. One hundred inches of cotton filling is taken from sample and weighs .643 of a grain. What will be the counts of warp and filling? The following rule can be used:

Inches weighed x 7,000 divided by weight of yarn weighed x 840 x 36; 100 x 7,000 divided by .827 x 840 x 36 equals 28 counts of cotton warp; 100 x 7,000 divided

THIS IS NO. 44 OF A SERIES ON

GETTING THE MOST FROM WINDING

Information about winding designed to show improvements in winding equipment and new ideas in the winding operation

NO. 90 TENSIONS FOR YARN DELIVERED FROM A VERTICAL, OVEREND SUPPLY

We are frequently asked to recommend the proper tension assembly for the several types of synthetic filament yarns. Naturally, our replies are pre-determined by the experiences of many mills. The opinions of mills do not always agree as to the qualifications of individual tensions, such opinions being prejudiced by long usage and continued familiarity with the kind of tension they happen to be using. It is our purpose to describe the four outstanding overend No. 90 Tensions and to specify what each is intended to accomplish.

NO. 90 REGULAR FINGER TENSION

The Regular Overhead Overend Finger Tension is used widely and successfully on all types of filament yarn.

Its action is very simple. Tension is primarily applied by weights suspended from a cord attached to the top of the movable grid. The pull of the weights causes the fingers of the movable grid to push themselves within the complementary spaces of the stationary grid, thus increasing the wrap of yarn as it passes between each set of fingers.

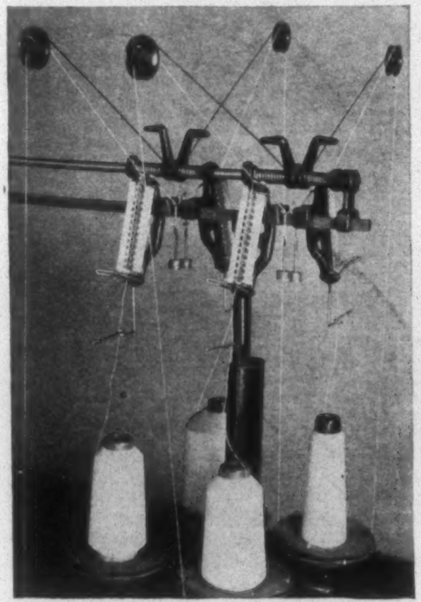

Fig. 1 Regular Overhead Overend Finger Tension

The Finger Tension is mounted on a special bracket which holds it at an angle of approximately 18° from the vertical. A compensator is always used to take up slack in the yarn created by the difference in yarn takeup speed between the top and low points of the traverse or slope of the bobbin.

Chromium-plating the grids of the Finger Tension provides durability, but they should be inspected regularly for wear.

NO. 90 ANTI-WEAR TENSION

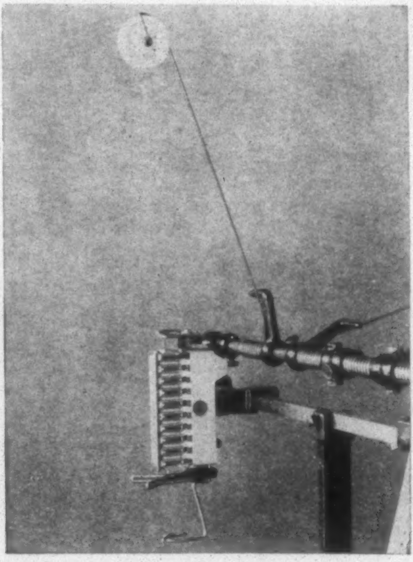

Fig. 2
Overhead Overend Anti-Wear Tension

The Overhead Overend Anti-Wear Tension is suitable for any type of rayon filament yarn, but is especially recommended for abrasive yarns.

It is similar to the Regular Finger Tension, except that its construction allows the yarn to oscillate between the two wide grids, reducing the possibility of wear. Pigtails above and below the grids have elongated slots which give the yarn freedom of motion laterally.

The Anti-Wear Tension is mounted vertically (not inclined) above the supply package. The compensator must be set so that the oscillation of the yarn will be within the breadth of the tension grids and should not, therefore, be pulled as far forward as is usual with the Regular Finger Tension.

NO. 90 DISC-QUIL TENSION

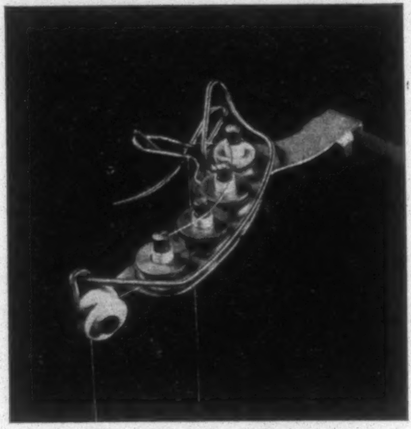

Fig. 3 Disc-Quil Tension

The Disc-Quil Tension is ideal for rayon filament yarn of 150 denier and finer.

It controls tension by allowing the yarn to pass between four sets of facing discs, which rotate as the yarn passes. Washer weights placed on the top discs, apply the desired amount of tension, progressively, to the yarn. Frictional contact with the yarn is obtained from sources which rotate, rather than remain stationary.

Some mills, handling a wide variety of filament yarn, including voile twist up to 30 turns per inch, have found this tension satisfactory for their entire range of yarns. To prevent kinks from forming in lively yarn, it can be wrapped around the anti-kink bail just before entering the first set of discs.

It is important to keep the discs clean. Lint and particles from pigmented and acetate yarn will tend to collect between the discs and also on the posts around which the discs rotate. Unless removed, the accumulation will elevate the upper discs and stop rotation—resulting in improper tension. Both discs must rotate. The bottom disc may only creep, but this is satisfactory.

The Disc-Quil Tension is not recommended for multi-filament yarns having little or no twist, since the rotating discs have a tendency to spread the filaments apart.

Note: Further information including facts on No. 90 Crepe Tension, will be sent upon request.

See our Catalog in TEXTILE YEARBOOK
43-GMW-44

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by .643 x 840 x 36 equals 36 counts of cotton filling. This rule can be applied to yarns other than cotton by substituting the standard length of each kind of yarn for the standard length of cotton. Standard lengths of different yarns are as follows:

Cotton: 840 yards in one pound of one counts; wool: 1,600 yards in one pound of one run; worsted: 560 yards in one pound of one size.

A constant number can be found for each of the above. In these calculations 7,000, standard length and 36 are used so that 7,000 divided by standard length x 36 will give the constant number. In cotton the constant will be .23148; in wool the constant will be .12153; in worsted the constant will be .34722.

This number multiplied by inches weighed divided by weight of same will give the counts or size of yarn. When 100 inches is used the decimal point can be moved two places to the right then divided by the weight. Examples: If 100 inches of cotton yarn taken from a sample weighs .827 of a grain, what will be the counts? (.23148 x 100 divided by .827 equals 28 counts). If 100 inches of worsted yarn weighs one grain what will be the size? (.34722 x 100 divided by one equals 34.722 size of yarn). If 100 inches of wool yarn weigh three grains, what will be the run? (.12153 x 100 divided by three equals 4.051 run). There are other short rules that can be used in these calculations.

Numbering Rayon

Rayon is in a different category from the above. In cotton, wool and worsted the higher numbers are the finer yarns but in rayon the lower numbers are the finer. The standard for rayon is 4,464,528 yards in one pound of one-denier. This number divided by the yarn denier will give the yards per pound in that denier. Examples: How many yards per pound will there be in a 150-denier yarn? (4,464,528 divided by 150 equals 29,763 yards.) How many yards per pound will there be in a 300-denier yarn? (4,464,528 divided by 300 equals 14,882 yards).

It is often necessary to convert the denier of a rayon yarn into its equivalent of cotton, wool, worsted and other yarns. Example: What is the equivalent in cotton of a 150-denier rayon yarn? (150-denier rayon yarn has 29,763 yards per pound; 29,763 divided by 840 equals 35.43 single cotton yarn).

To convert rayon yarns to other systems of numbering the following table can be used:

Rayon to cotton: 5,315 divided by denier number equals single cotton counts.

Cotton to rayon: 5,315 divided by single cotton counts equals denier number.

Rayon to wool: 2,790 divided by denier number equals wool in run.

Wool to rayon: 2,790 divided by wool run equals denier number.

Rayon to worsted: 7,972 divided by denier number equals worsted size.

Worsted to rayon: 7,972 divided by worsted size equals denier number.

To obtain counts by comparison, a few threads of a known count are twisted with an equal number of threads taken from the sample. This is considered by many to be better than weighing. First, because it is easier, and second, because it is much quicker. Of course one has to get accustomed to this before he can work quickly. Practice will make a person proficient both in weighing and comparison. To illustrate this method a sketch is given at Fig. 391. This shows one thread passing through another, or can be understood to represent, say, five threads passing through five threads. A will represent the known counts. B will represent the unknown counts taken from sample. By taking the ends of A and B between the thumb and finger of each hand and twisting them equally it will be seen whether both sets of threads are the same thickness or not. If they are, the counts will be the same; if not, other known counts will be twisted with the unknown until the right counts are obtained.

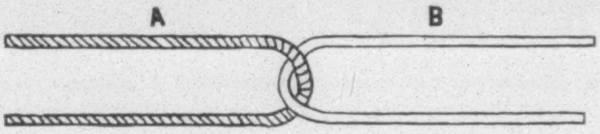

FIG. 391

Sley and pick—Sley means threads per inch in warp; picks means threads per inch in filling. This is indicated by figures, as 76 x 72, which means there are 76 threads and 72 picks per inch in the fabric. The threads should always be indicated before the picks.

Threads or dents per inch—When a fabric has to be reproduced, the threads or dents per inch have to be found. Threads per inch when the fabric is reeded equally throughout, that is two or an equal number of threads in a dent; dents per inch when the fabric is unequally reeded, that is in some dents two threads and in others three or more threads or empty dents. There are at least three reasons why the threads or dents per inch should be found. First, to find reed number; second, to find threads in warp; third, to find patterns in warp. In order to find the threads per inch a pick glass one inch square is generally used. This glass magnifies the threads so that the number per inch can readily be counted. A smaller glass could be used, one-half inch or one-quarter inch, but the result cannot be depended on as well as when using the full one-inch glass.

When the fabric is reeded unequally the dents per inch are more difficult to obtain. Suppose a small sample of fabric consists of plain, stripe, and a cord, and the dents per inch have to be obtained.

If there is sufficient plain cloth to count the threads in one inch or one-half inch the dents per inch in sample can readily be found, but if not, then another method will have to be used. The following is a good method to use for either stripes or cords: Put pick glass on sample, take a pair of dividers and obtain width of stripe. Then put the dividers on that portion of the sample that is weaving plain and it will be seen how many dents the stripe occupies. Do the same thing with the cord; never depend on a guess with a cord, especially on fine goods, for it frequently happens that an empty dent is left next to the dent with the cord in it. By using the dividers as described it will readily be seen whether there is an empty dent or not. Having obtained the number of dents in stripe and cord, all that is necessary to do now is to count the dents in one inch through the pick glass. If there is no plain cloth in a sample, judgment is required to determine the number of dents per inch.

Threads or dents in pattern—There are two methods of

(*Continued on Page 54*)

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Keeping up Production of Vat Dyed Piece Goods for Civilian Consumption

By ALLISON FITZGERALD

Part Seventeen of a Series on Wartime Processing

Part sixteen of this series (see Feb. 1, 1944, issue) dealt with the use of Class B (anthraquinone) and D (indigoid) vat colors for the dyeing of civilian goods in place of the Class A anthraquinone vat colors now being used entirely on government contracts in respect to WPB's Conservation Order M-103. Reference was made to the use of selected napthols in this range of shades, as these colors properly dyed and finished possess sufficient fastness to be classed under the heading of "vat dyed" since the fastness of many napthol dyed shades is equal, if not superior, to some of the vat colors. This article takes up the dyeing of various shades with napthols on warps, packages and raw stock.—Technical Editor.

NAPTHOL colors complement vat colors, as many of the weakest and most expensive vat dyed shades can be obtained economically and in many cases they possess superior fastness to the heavy vat dyed shades. The napthol colors must be carefully selected in order to get fastness equal to the vat colors on light and No. 3 A.A.T.C.C. wash tests. This is also true in obtaining napthol reds, wines, yellows and oranges that possess the necessary fastness to chlorine and peroxide bleaches. Blacks and browns are usually run on raw stock and packages, as they possess exceptional wash and light fastness and give more level dyeings than when run on warp machines.

There are many requirements necessary to obtain level, well penetrated and uniformly dyed napthol shades from lot to lot. The essential ones are: (1) the napthol used must be very soluble and remain soluble throughout dyeing (naptholation operation), especially in those naptholating baths where it is necessary to use formaldehyde and salt; (2) substantive napthols are the desirable types to use on package, raw stock and warp dyeing but non-substantive types such as Napthol AS-G and AS-BS may be used if necessary for shade; (3) where substantive napthols are used to naptholate the goods they must be of uniform salt rinsing types. If non-substantive type napthols are dyed, these types are best handled by giving a vacuum suction on packages and beams; on raw stock, remove, give a hydro-extraction, and return to machine for developing, though several "air blowouts" help if stock cannot be removed and extracted. On warps, the warp rope may be squeezed heavier and given a light cold water spray while running through the squeeze rolls; (4) the rate of exhaust of the naptholate bath is essential for a level dyed shade. If two or three napthols are used, then it is necessary on package and raw stock to raise the dyeing temperature up to 120-130° F. and reduce the amount of salt used to a minimum. For the warps, it is best to pad at 125-140° F., not using any salt, and run one or more extra ends when only one napthol is used in naptholation bath.

The fast color salt or base used must give a clear and stable solution throughout the developing operation. During the developing operation any fast color salt or diazotized base solution that tends to build up a foamy top is risky, as bits of the foam will cling to the goods being dyed and cause "tar spots." This is a complaint that arises when dyeing Fast Red 2G and Garnet GBC, especially on warps and piece goods continuous napthol dyeing.

A moderate rate of developing the shade is desirable, and on most of the properly prepared fast color salts and diazotized base solutions there are three methods of controlling this from a practical standpoint. These are: (a) addition of acetic or formic acid to retard the developing action; (b) addition of sodium acetate to speed up developing; and (c) the necessity of keeping a cold bath of around 70° F., as this is more important than the use of acetic acid or sodium acetate. Use fast color salts or bases which are not sensitive to light—Fast Blue B is a very sensitive type. The developed shade should be easy to rinse and soap off, but care must be observed to see that all traces of acid are removed from the goods by proper neutralization and use of fatty alcohol or Calgon before starting the soaping off bath.

For dyeing 1,000 pounds of raw stock with Napthol Red, run wet-out bath 30 minutes at 180° F., using one gallon of one per cent Tergitol. Drain off bath, give running wash for ten minutes. The spring bath is run at 120° F. with 25 pounds of 2.5 per cent caustic soda, five pounds of 0.5 per cent Igepon T Gel, 30 pounds of three per cent Napthol AS-SW. For cold method, paste up with alcohol and add the necessary amount of caustic soda to dissolve, enter in two parts, run 20 minutes, then add 25 per cent salt, run 25 minutes, drain bath, follow with ten-minute salt wash, cold, using 200 pounds of salt. Developing bath (cold) is as follows: 30 pounds three per cent Fast Red KB Base, hot water to dissolve; 30 pounds three per cent muriatic acid, ice to 45° F.; 14 pounds 1.4 per cent sodium nitrite, diazotize 30 minutes; 30 pounds three per cent sodium acetate; ten pounds one per cent formic acid; enter ten pounds one per cent Diazopon A in expansion tank with ice and 50 pounds of salt, strain in neutralized base solution in one part; run developing bath 40 minutes cold at 60 to 80° F., then drain off and give running cold wash; add five pounds of trisodium phosphate, ten pounds of Igepon T Gel; raise to 190° F., run 30 minutes, drain off and give two hot washes at 186° F. If stock bleeds, repeat the soaping off until clear; on final rinse give necessary salt and finish up.

The following formulas for other napthol colors are run on raw stock similarly to the procedure for Napthol Red

(*Continued on Page 49*)

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MILL NEWS

Gastonia, N. C.—The waste warehouse at the Armstrong plant of Gastonia Combed Yarn Corp. was demolished by flames April 5, with a loss of approximately $2,000. The warehouse was filled with a low grade of waste, it was reported, which was a total loss. Origin of the fire was undetermined.

Hartwell, Ga.—All common stock held by W. H. Jennings and his family in Hartwell Mfg. Co., Inc., has been sold to R. J. Jeness of New Orleans. Resignation of Mr. Jennings as president and chairman of the board of directors severs his connection with that organization. Future management of Hartwell Mfg. Co. will be conducted by the new owner.

Talladega, Ala.—The appeals board of the War Production Board, meeting in Washington recently, granted the application of Wehadkee Yarn Mills, Inc., of West Point, Ga., to be relieved of a directive requiring the production of denims in order to convert the mill to production of heavy yarn to be used exclusively in manufacturing badly needed duck. The plant was formerly owned by Samoset Cotton Mills, and it was bought at a public sale recently by the present owners. Although the appeal was first presented April 7, the board's decision was not made public until April 12.

Sylacauga, Ala.—The annual spring inspection of all Avondale Mills plants will be held May 1, 2 and 3, according to an announcement by company officials. This 23rd inspection will be made by mill executives, customers, bankers, merchandisers, suppliers, Army and Navy officers and others interested in the company's operations.

The "E's" Keep Coming

Ceremonies for awarding of the Army-Navy "E" to Atlanta (Ga.) Woolen Mills have been set for April 25, according to F. L. McGinty, secretary of the company which was recently notified by Under Secretary of War Robert Patterson that its production record has merited the pennant. The presentation will take place in the afternoon at the plant, with employees, officers of the plant and service officials present.

Three additional textile manufacturing firms in the South have been informed by Mr. Patterson that their continued excellent war production activities have resulted in the addition of an initial white star to "E" pennants presented some six months previously. They are Union Bleachery of Greenville, S. C., the American Viscose Corp. plant at Front Royal, Va., and Avondale Mills, with seven plants in Alabama.

Macon, Ga.—Ruling that Bibb Mfg. Co. established its good faith, although holding that the concern had violated Section 12 (a) of the Fair Labor Standards Act by use of under-age employees, Judge Bascom S. Deaver of U. S. District Court recently denied an injunction asked by Department of Labor on the grounds that it is not necessary. Question of employment and employment policies of Bibb Mfg. Co., operator of 13 mills in middle Georgia, were involved. The department charged the company with employing persons under 16 years of age and between 16 and 18 years of age without work certificates.

Brodnax, Va.—Brodnax Cotton Mills, partly destroyed by fire last September, has been purchased by outside interests. Plans are being completed to rebuild the plant promptly, with facilities expanded to approximately one and one-half times the original plant.

Verona, Va.—Staunton Textile Corp. has been given permission by the War Production Board to complete part of the remaining construction on its weaving mill and to equip a section of the plant. No definite completion date has been arrived at as yet, but it is hoped that a small part of the plant will be in operation by fall. The entire project has been held up for more than a year due to the impossibility of securing the necessary machinery. The plant, construction of which was started in 1941, is located on a 147-acre tract northeast of Verona, buildings already completed covering about five and a quarter acres. Permission also has been granted for the plant to be served with power.

Scottsville, Va.—United States Rubber Co. has begun construction of a new textile manufacturing plant at Scottsville. Cost of the new project which, including land, building and machinery, is estimated at $2,240,000, will be financed by the Defense Plant Corp. The construction contract has been awarded to Daniel Construction Co. of Greenville, S. C. The new plant is a part of the government program to supply more rayon tire cord needed in the manufacture of synthetic rubber truck and bus tires. When completed it will produce 12,000,000 pounds of twisted rayon tire cord annually, enough to build 600,000 medium sized synthetic rubber truck tires. Present plans call for full operation of the Scottsville project by October. Approximately 300 people will be employed. A comprehensive training program is being started at once to utilize local labor without previous textile experience. Modern machinery for the twisting and weaving of rayon tire cord will be installed throughout, including mechanical and auxiliary equipment of the latest design to facilitate easy handling of raw and processed materials. To insure the highest quality production and to provide the best possible working conditions, the plant will be air conditioned throughout. The plant will be windowless and temperature and humidity control maintained by a complete change of air every six minutes.

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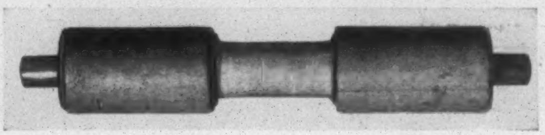

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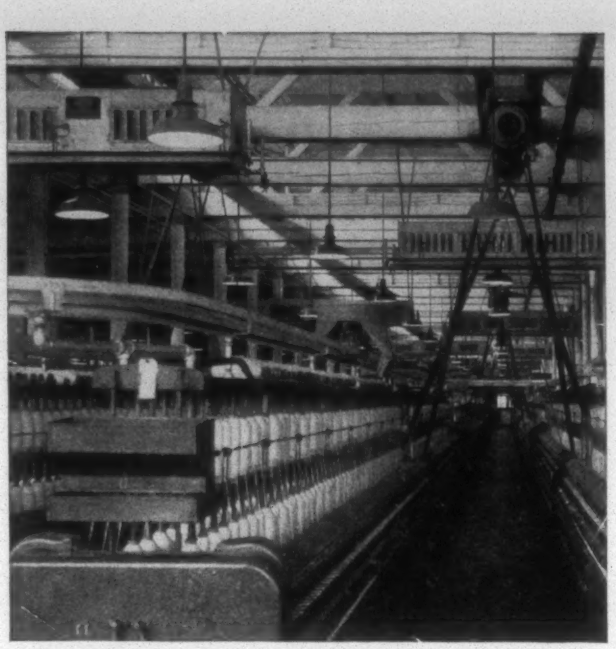

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PERSONAL NEWS

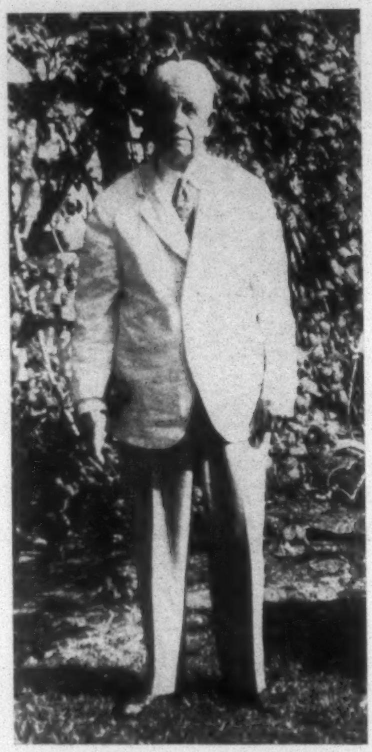
John H. Foard, Southern representative for Ragan Ring Co. of Atlanta, was passing out the cigars in his home town of Newton, N. C., recently. It's a boy—christened, of course, John H. Foard, Jr.

James E. MacDougall has resigned his position as manager of the Charlotte district office of the War Production Board and will return to his former position as Southern sales representative for Smith, Drum & Co., of Philadelphia. He will continue to make Charlotte his home. Mr. MacDougall was a member of the sales force of the Philadelphia manufacturer for a number of years before entering the government service over two years ago and is widely known throughout the Southern textile industry. Under his management, the territory served by the Charlotte office of the WPB has been materially broadened, with a corresponding increase in personnel, and the office has rendered a very helpful service to the textile mills in this section. At the present time, Mr. MacDougall is recuperating from a recent illness and he does not expect to assume his duties with Smith, Drum & Co. before May 1.

Dr. William P. Jacobs has resigned as executive vice-president of the Cotton Manufacturers Association of South Carolina following physician's orders that he reduce the amount of his widespread activities. Besides being president of Presbyterian College and the Jacobs Press of Clinton, S. C., he was at one time head of the Print Cloth Group.

Bernice S. Bronner has joined the staff of the American Standards Association, according to a recent announcement. Miss Bronner, who will hold the title of textile technologist in her A.S.A. work, is already familiar with the activities of the association through service on A.S.A. committees. Previous to her appointment she was head of the textile laboratory of Good Housekeeping Institute, where her work entailed assigning and supervising all physical, chemical and wear tests, writing textile editorials for the magazine and checking textile advertising copy offered for advertising. Before this, Miss Bronner was with Brown Durrell Co., hosiery and underwear distributors. She is secretary of the American Association of Textile Technologists, vice-chairman of the membership committee of the American Association of Textile Chemists and Colorists, and a member of A.S.T.M. Committee D-13, in charge of specifications for textile materials.

At directors' meeting held last month, New York & New Jersey Lubricant Co., 292 Madison Avenue, New York City, elected Joseph H. Bennis president to succeed W. F. Kimball, retired due to ill health. Mr. Bennis has been associated with the company since its organization in 1896 and has been head of its sales department for over 30 years.



W. H. Randolph, Sr. (above) of the New York office of A. E. Staley Mfg. Co., last month completed his 65th year as a starch salesman. Anyone in the Staley organization will agree that "Senior," as he is known, has established quite a record. He joined the company's New York office 24 years ago and has disdained any idea of retiring throughout the years. As usual, he is spending the winter in Florida, a practice he has followed each year after arranging business matters for the time of his absence. Son "Junior" Randolph (W. H., Jr.) is Southeastern manager for the organization, with headquarters in Atlanta.

Delbert J. Hayden, assistant controller of the Atlantic Rayon Corp., Providence, R. I., and Earle L. Brown, comptroller of the Marshall Field & Co. Mfg. Division at Spray, N. C., have been elected to membership in the Controllers Institute of America.

Marcus M. Brown has succeeded K. J. Pedersen as representative in the Carolinas and part of Virginia for Acme Steel Co., following the latter's return to the Chicago headquarters of the company. Mr. Brown, who formerly acted as agent for several manufacturers of industrial equipment, will make his headquarters in Charlotte.

R. L. Hulsey is now superintendent of carding, spinning, warping and slashing at Brookside Mills, Knoxville, Tenn. A. R. Tanner, formerly of Augusta, Ga., is now general overseer of carding. S. B. Smith, formerly with Gossett Mills at Anderson, S. C., is now general overseer of spinning at the plant.

W. B. Davis of Newnan, Ga., has been elected president of the Atlantic Cotton Association, succeeding C. W. Shepard, Jr., of Gadsden, Ala. Other officers chosen at the recent annual meeting in Greenville, S. C., are John M. Little of Union, S. C., vice-president; J. M. Cloer, Jr., of Atlanta, secretary; and F. G. Hill of Atlanta, treasurer.

R. T. Dunlap and E. F. Early have been elected vice-presidents of Wickwire Spencer Steel Co. Mr. Dunlap was previously assistant to the president and for the past several months has been acting in the capacity of general superintendent at the company's Buffalo plant. Mr. Early has long been associated with Wickwire Spencer and is general superintendent at the company's Worcester, Mass., plant.

Graham H. Anthony has resigned as president of Veeder-Root, Inc., Hartford, Conn., to become president of Colt's Patent Fire Arms Mfg. Co. He will be succeeded at Veeder-Root by John H. Chaplin, executive vice-president.

Dr. Milton Harris, director of fundamental research for the Textile Research Institute, Inc., has been elected a fellow in the Textile Institute located at St. Mary's Parsonage, Manchester, England. Fuller E. Callaway, Jr., president of Callaway Mills at LaGrange, Ga., and Charles B. Ordway, technical director for American Aniline Products, Inc., Charlotte, N. C., have been elected to membership in the organization.

R. Foster Howell, field agent for the Cotton-Textile Institute, Inc., in the Southeastern states, has been granted a leave of absence to become an industry member of the Fourth Regional War Labor Board at Atlanta, Ga. Mr. Howell has offices at headquarters of the Cotton Manufacturers Association of Georgia, where he is available for assisting textile mills in their dealings with WLB.

Ellison S. McKissick, president of Alice Mfg. Co., will become president of the Easley (S. C.) Rotary Club in July. His election was announced after a recent meeting of the club board of directors.

S. Frank Jones, assistant secretary and treasurer of Gossett Mills, has been elected president of the Anderson (S. C.) Rotary Club.

R. G. Chatham, personnel manager for Chatham Mfg. Co., Elkin, N. C., since 1940, has resigned to volunteer for Army service. He reported for duty April 5. C. C. Poindexter has succeeded him.

Guy M. Vann has resigned as superintendent of the Aponaug Mfg. Co. plant at Kosciusko, Miss., to accept a similar position at Forsyth (Ga.) Cotton Mills.

(*Continued on 45*)

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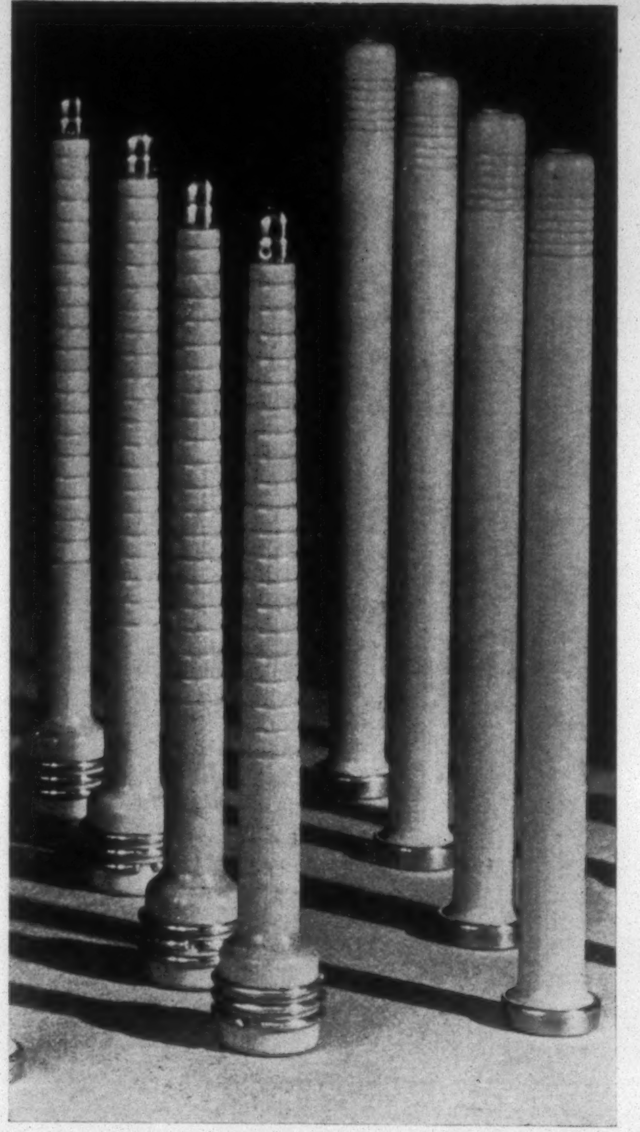

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Hightower Named American Association President at 48th Annual Convention

MEMBERS of the American Cotton Manufacturers Association, meeting for their 48th annual convention at the Biltmore Hotel in Atlanta April 12, elected W. Harrison Hightower of Thomaston, Ga., as president to succeed Hugh Comer of Sylacauga, Ala. New first vice-president of the association is Maj. Stuart W. Cramer, Jr., of Cramerton, N. C., and the second vice-president is Walter S. Montgomery of Spartanburg, S. C.

W. H. Hightower

S. W. Cramer, Jr.

W. S. Montgomery

The convention, although confined to one day, featured a full and informative program. The speakers were Donald M. Nelson, chairman of the War Production Board, Ward Delaney, president of the newly-organized Institute of Textile Technology, and Maj.-Gen. Edmund P. Gregory, Quartermaster General of the United States Army. The two government representatives dealt with war demands for textiles and problems relative to the necessarily huge procurement needs, while Mr. Delaney explained the organization and objectives of the institute.

W. M. McLaurine of Charlotte was re-elected secretary-treasurer of the Association. New directors named were A. K. Winget of Gastonia, N. C., H. K. Hallet of Charlotte, Charles Hertwig of Macon, Ga., and Earle R. Stall of Greenville, S. C. They replace Mr. Cramer and Mr. Montgomery, now officers of the association, and R. C. Moore of Charlotte and Scott Russell of Macon, Ga., whose terms expired. Other current directors are S. M. Beattie of Greenville, Fuller E. Callaway of LaGrange, Ga., C. A. Cannon of Kannapolis, N. C., Norman E. Elsas of Atlanta, W. H. Entwistle of Rockingham, N. C., Joe L. Lanier of West Point, Ga., Ellison S. McKissick of Greenville, Harvey W. Moore of Concord, N. C., G. P. Swift of Columbus, Ga., and George M. Wright, Great Falls, S. C.

A dinner meeting of the association's board of government was held the night before the convention, at which time officials discussed plans for the future of the organization.

The morning session April 12 began at 10 o'clock, with Donald Nelson the first speaker. He was followed by Ward Delaney. The luncheon session featured the remarks of General Gregory and the annual address of the association president, Hugh M. Comer. Entertainment at this session was furnished by the Avondale Girls from Mr. Comer's organization, who presented a skit on absenteeism. During the course of his speech, which will be found elsewhere in this issue, Mr. Comer announced that, beginning this year, he would offer a trophy to the mill in the American Association which shows the best safety program. Upon unveiling the large trophy he stated that he hoped to see the association establish a formal contest through which the trophy could be awarded annually.

The afternoon business session was used for the passing of resolutions of regret in the deaths of association members, and thanks to various persons who assisted in the

Above is a view of those present for the luncheon meeting of the American Cotton Manufacturers Association.

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convention program. The election of officers also took place at this session.

In his address, Donald Nelson displayed a clear knowledge of the textile industry and its problems. The convention heard the U. S. production chief call for reversal of a current downward trend in textile output through longer working hours, greater personnel efficiency and progressive action to curb absenteeism.

Industry's Prestige to Rise

"When the full story of the cotton textile industry's contribution to the war effort is understood, the prestige of the industry will rise greatly in the public mind," he declared. "Many industrialists have come to depend on industrial cotton cloths; millions of civilians are better disposed toward cotton garments than ever before."

The mills, he added, have learned invaluable "know-how" due to their war work and will learn more this year through further step-ups.

He termed the chief obstacle to more production a "disheartening and increasing shortage of manpower," which has dropped by 47,000 workers since 1942.

In addition to this, he declared, absenteeism ranged from two per cent in some plants to ten per cent in others. More efficiency in manpower handling is especially needed on the third shift, he added.

He called on mill owners to reduce absenteeism by raising "the level of employee morale" by helping solve transportation problems and lack of domestic help in homes. Better personnel management is needed in many mills for more efficient placement of workers, he advised.

The manufacturers were told by General Gregory that the bulk of Army textile contracts may be so priced as to be exempt from renegotiation by June.

"This development," he said, "is made possible for the accumulated buying experience of the Quartermaster Corps, and the assembly, with the aid of the industry, of adequate cost data." He said another industry problem had been met by reduction of Army standards on textiles.

At the same time, the Quartermaster General said that some of the more rigid provisions of quartermaster inspection procedure were being relaxed so that textile manufacturers may more easily meet War Department standards. Some types of goods which might not be acceptable under peacetime standards, he said, will be brought into the category of acceptable merchandise if the irregularities are not such as to defeat the purpose for which the fabric was woven.

General Gregory likewise appealed to those manufacturers who have been making Army six-ounce shirting to convert their looms, wherever possible, to the manufacture of a newly-developed high-density, water repellent fabric, used in the making of cases for soldiers' sleeping bags.

Another request made by the speaker was that the cotton textile manufacturers make offerings of fabrics to fill the acute shortage in allocation of these goods for Lend-Lease shipment to Australia. The welfare of American forces in the Pacific, he pointed out, depends upon the continuance at as high a level as possible of the Australian civilian economy, since the civilian population of that country is producing much of the the food as well as many manufactured products used by our soldiers and those of our Allies in the Pacific.

Fiber Developments Cited

Mr. Delaney told those present that the industry must anticipate important technological developments in the field of fibers and warned that "if the plans of chemical companies work out, they will no longer need cotton textile machinery—they will process their product into its finished form themselves and become a competitor to you instead of your customer."

He cited the war effort as the number one concern of the industry now, but emphasized the need for research in physics, chemistry and metallurgical and mechanical laboratories such as the institute has set up at Charlottesville, Va. He outlined the courses, methods followed, and research facilities provided for cotton textile mills as a result.

Mr. Delaney stated that cottons will soon be used in carriers for much more important materials, such as the newly-developed resins. He indicated that mill men must inform themselves fully on silk, wool, casein and soy proteins; plasticizers and finishing agents; and on fiber surface studies. The performance of cotton itself must be improved, he said, and the industry must "improve cotton machinery so the labor cost to us is not so high."

At the main luncheon table, left to right: R. A. Spaugh, Jr., president of the North Carolina Cotton Manufacturers Association; Herman Cone, chairman of the board of the Cotton-Textile Institute, Inc.; J. A. Chapman, retiring first vice-president of the American Cotton Manufacturers Association; Col. Robert T. Stevens, deputy director of purchases, Office of the Quartermaster General; Hugh M. Comer, retiring president of the American Association; Maj.-Gen. Edmund P. Gregory, the Army's Quartermaster General; Harrison Hightower, new president of the American Association; B. F. Hagood, president of the Cotton Manufacturers Association of South Carolina; O. Max Gardner, former governor of North Carolina and legal advisor to the Cotton-Textile Institute; and W. Ray Bell, president of the Association of Cotton Textile Merchants of New York.

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Progress In Textile Education

While attending the meeting of the American Cotton Manufacturers Association in Atlanta, Ga., we were told that the Educational Foundation of Georgia, which was organized for the improvement of textile education, had not only already received donations to the extent of more than $530,000, as against $512,000 received by the North Carolina Textile Foundation, Inc., but had entered into an agreement with the Board of Regents of the University System of Georgia whereby the Board of Regents would increase the annual appropriation for the Textile School at Georgia Tech to the amount of an agreed donation by the Educational Foundation of Georgia.

We were also told that plans for a new textile school building at Georgia Tech are being drawn and that the Legislature will be asked to make an appropriation for it.

The total amount to be provided annually by the Board of Regents and the Educational Foundation of Georgia will be slightly in excess of the amount to be furnished the Textile School of North Carolina State College by the North Carolina Textile Foundation, Inc., and insures that textile education in Georgia will soon be placed upon a very satisfactory basis.

We were unable to obtain very much information about the possibility of establishing an equally strong textile school at Clemson College.

We were told that the J. E. Sirrine Textile Foundation recently established in South Carolina had pledges to the extent of $600,000, but one man expressed the opinion that not more than half of that amount had actually been paid. It was anticipated that the balance would be received during 1944.

The weakness of the South Carolina situation is the intention to invest all of the principal and use only the interest.

If the entire $600,000 is collected, it is very doubtful that a return of more than 2 per cent can be obtained and therefore only $12,000 per year will be available as against $40,000 to $50,000 per year available for the improvement of textile education at both Georgia Tech and North Carolina State College.

It has been our desire to see three strong textile schools, each with a staff of outstanding and experienced textile manufacturers as teachers and instructors.

With three such schools each co-operating with the others and exchanging information, the textile industry of the South would in a very few years feel the influence of their graduates.

The South Carolina plan of conserving the principal may be good from the banking standpoint but it is definitely weak from the point of the production of well educated textile graduates.

At the end of 20 years South Carolina will still have its $600,000 but will not have accomplished very much from the standpoint of textile education.

North Carolina and Georgia will each have spent its $600,000, or whatever amount is raised, but in the place of its money will have several thousand well trained men operating its textile mills and will have had the benefit of services of many of them for 15 years or more.

If their training has been worthwhile these men will be able to raise another $600,000 to continue the textile education program of their states for another 20 years, because it is more than probable that there will be another boom period within that time.

We had rather have the textile graduates who came to the industry as the result of spending $600,000 than to have that amount in bank at the end of 20 years.

We still have confidence that textile education at Clemson College will not be allowed to lag behind that at N. C. State College and Georgia Tech. If it is not placed upon a par with them, many of the young men of South Carolina will seek their textile education at the other two institutions because, not only will they receive better instruction, but there will be better opportunities for securing satisfactory positions after graduation.

In view of the very fine reputation which the graduates of the Textile School of Clemson College have enjoyed in the past, that would be a strange situation indeed.

If three strong textile schools can be established, it is our opinion that during the next 10 or 15 years the graduates of those schools will, because of their education, do more worthwhile research than all of the textile research organizations which have been set up.

Sometime ago a few of those who are particularly interested in textile research were impatient with us because of an editorial in which we expressed doubt about the results to be obtained from highly technical research.

We stated then that we thought highly of practical research conducted by textile manufacturers or under their direct and intimate supervision, but were very doubtful of research conducted otherwise.

We stated that in our opinion the isolated location of the Government cotton research laboratory at New Orleans, where it had few contacts with textile manufacturers, had been a mistake and that we had failed to note anything which they had accomplished which was of real value to cotton mills.

We feel the same way about the location of the Institute of Textile Technology at the University of Virginia at Charlottesville, Va.

The University of Virginia is a fine institution and is a leader in its field of culture and liberal arts.

Its president and its faculty are primarily interested in educating young men. No negro communists are entertained and allowed to address students as at the University of North Carolina. No professors have gone to negro hotels at nearby towns to take dinner with negroes. There was no "We Will Not Fight" rally at the outbreak of the war. None of its professors, under the illusion that Russia was still communistic and on the side of the Axis, made speeches in 1941 charging that the capitalists had forced the United States to enter the war upon the side of England.

We have heard that the reason for location of the Institute of Textile Technology at the University of Virginia was that it had a fine library.

The works of Scott or Dickens and similar authors will be of no benefit in conducting textile research and all of the books which will be useful for textile research can be purchased for a few thousand dollars.

Greenville, S. C., would have been an ideal location for the Institute. There, instead of the almost complete isolation at Charlottesville, Va., the men engaged in textile research would have been in almost daily contact with a very able group of mill executives, located in an around that city, and with many graduates of textile schools who are operating mills or departments of mills.

Every new textile manufacturing device is more or less ineffective until placed in a mill and always it is perfected by reason of advice and suggestions of mill men.

Could the research to be done by the Institute of Textile Technology be conducted where developments could be discussed and criticized by men engaged in textile manufacturing, there would be a much greater chance of accomplishing something worthwhile.

Even New York City would have been better than Charlottesville, Va., because there would have been contacts with selling agents and with men who are constantly constructing new fabrics and know the adaptability of yarns of all types.

It is not too late for the blunder to be corrected and there is no need for those responsible to become angry with us for this criticism and stop there. It will be far better for them to make inquiry of other textile manufacturers and find out whether or not their opinion coincides with ours.

When the editor of this publication left the Textile Institute at Manchester, England, one afternoon some years ago, everybody there was glad to see him leave.

He had asked the manager and his assistants, who had been conducting highly technical textile research for a number of years, "What have you done which has resulted in real benefit to your cotton mills?

If they had ever done anything which was of real value to the cotton mills of England they failed to mention it and it became apparent that our question was embarrassing and that they did not wish to discuss the matter.

Two years from now and three years from now we are liable to ask the Institute of Textile Technology, "What have you done which has been of real benefit to the textile industry? What have you to show as the result of the expenditure of large sums of money?"

If the location of the Institute of Textile Technology can be moved to Greenville, S. C., or some point where those engaged in its work can have contacts and the advice of mill men of experience, we would be hopeful of results.

Because we would like to see them succeed we are calling attention to the disadvantages incident to the proposal to do textile research at an isolated point rather than where textile experience and contacts are available.

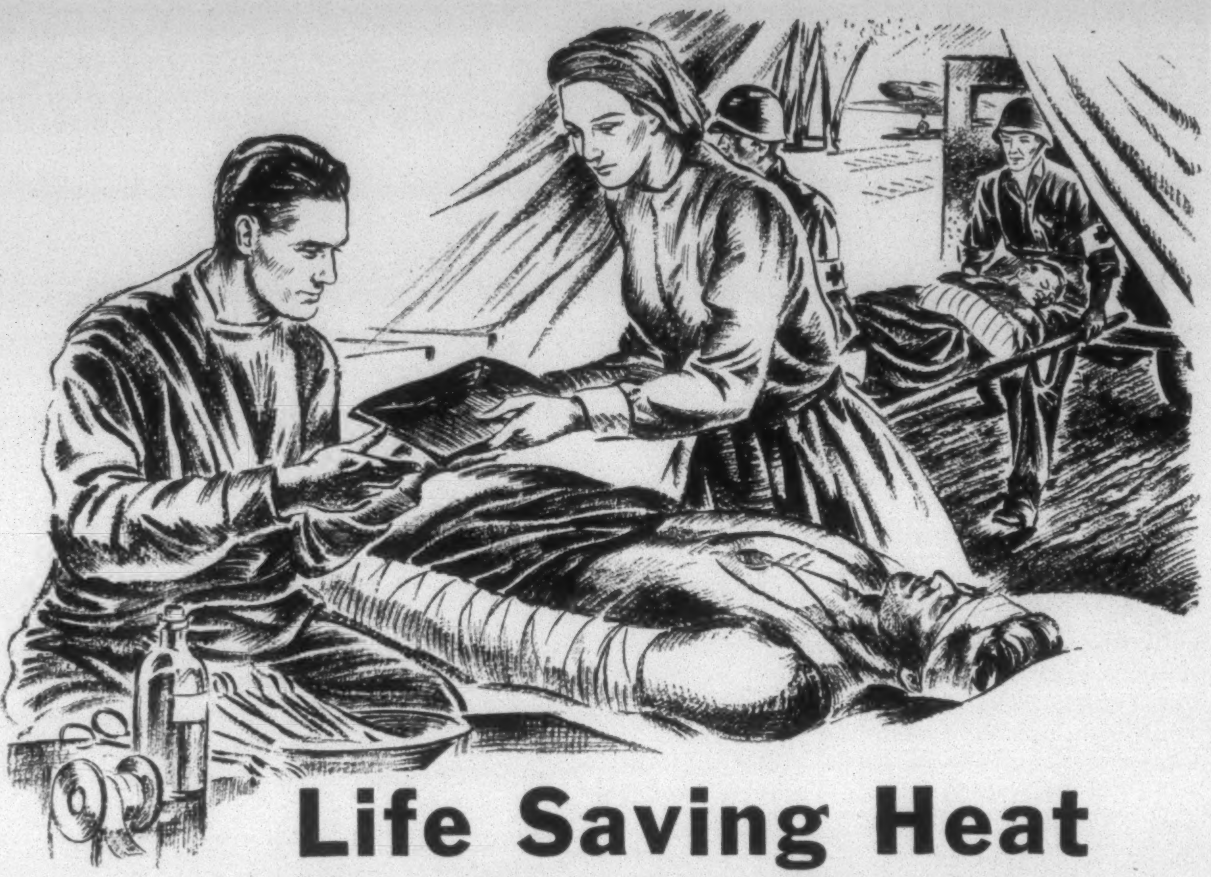
Harry Riemer Promoted

We congratulate Harry Riemer upon his promotion to editor of the *Daily News Record* of New York and we congratulate the Fairchild Publications upon appointing such an efficient and popular man to that position.

Harry Riemer has been associated with the *Daily News Record* for 28 years and has for 27 years been editor of the dry goods section of that publication.

He is not only known by practically every textile manufacturer in the South but is universally held in high esteem.

News of his promotion is being received with pleasure and approval.



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of equipment now in use in the wet end of textile finishing cannot operate at a profit in competition with modern machines.

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DYEING AND FINISHING

Notes on Dyes and Dyeing

By GEORGE BROUN

Direct Dyestuffs—Part One

THE direct or substantive dyestuffs were first discovered by Boettiger in 1884 when Congo Red was made. These dyestuffs are commonly known as "cotton" colors and may be applied to all vegetable fibers (cotton, linen and regenerated rayons) as well as silk, and many direct colors will dye wool. The direct dyeing property of these dyestuffs on vegetable fibers excited the dyers of that period greatly, as all known dyestuffs up to that period required a pre-mordanting operation with tannic acid or some other agent before they could be dyed.

Green and other dyestuff authorities give the following sub-classification of direct colors under the following chemical grouping:

		Color Index
Disazo	Direct Purpurine 4B	448
Trisozo	Direct Fast Black FF Ex.	539
Stibbine	Mikado Orange	621
	Mikado Yellow	622
Tetrakisozo	Toluylene Orange R	446
Triazol	Primuline	812

Dyestuffs makers have continued to manufacture many additional direct dyeing dyestuffs and improve those already under production. The textile dyeing industry as well as the dyestuff makers have long recognized the simplicity of application of direct colors and the widespread use of colors on vegetable fibers and fabrics can be chiefly attributed to their discovery.

Direct colors vary widely as to their physical and chemical properties; some of the less expensive types producing reds, violets and maroon shades are quite sensitive to chemicals, and Congo Red is used as a chemical indicator in chemical tests due to its sensitivity to acids and alkalies.

Direct Dyestuff Theories

There have been several theories as to what actually happens to direct dyestuffs when they are applied to vegetable or animal fibers in a water solution. These theories have been largely based on studies of direct dyestuffs being applied to cotton in a neutral salt bath prepared with sodium chloride (common salt) or Glauber's salt (sodium sulfate). The chief dyeing theories have been known as chemical, mechanical aid colloidal, and the scientists supporting these various contentions have advanced the following ideas to support their theories:

Chemical theory: (1) all direct dyestuffs are chemical compounds possessing basic or acid properties to a certain degree; (2) cotton and other natural textile fibers possess acid or basic properties to a limited degree. They can take up acids, alkalis and other chemical salts and compounds from water solutions and retain these chemicals under the most vigorous treatment; (3) when textile fibers are placed in an aqueous solution containing dissolved dyestuffs, chemical reactions take place whereby these dyestuffs are gradually removed from these aqueous solutions and combine with the fibers due to the chemical affinity exerted between the dyestuffs and fibers.

Mechanical theory: (1) the best known theorist supporting the mechanical theory of dyeing was Witt, who regarded fibers as solid or static solvents which removed the dyestuff from the aqueous solution or liquid solvent; (2) dye solutions are very minute particles in an aqueous solution and on the addition of such agents as sodium chloride, sodium sulfate, or phosphate of soda, tend to show affinity for the fibers and form large aggregates within these fibers by passing through fiberous pores; (3) the reformation of these dye aggregates within the fiber interior depends upon certain physical and chemical changes brought about within the interior of the fiber and in the dye solution by the addition of the chemical assistants added to the aqueous bath.

Colloidal theory: (1) an ionic interchange between the dyestuff in the aqueous solution and the fiber; (2) the addition of salts and other chemicals to the aqeous solution can either increase or decrease this interchange between dyestuff and fiber. These salts serve as electrolytes in the dyebath.

Recent investigations tend to show that the colloidal theory gives a truer picture of what is actually taking place in the dyeing of direct dyes on cotton and vegetable fibers. It has shown that purified cellulose, when placed in a direct dye solution, is not dyed unless some electrolyte is introduced into the bath.

Several of the leading textile investigators have tried to show experimentally that the addition of mild alkalies to direct colors acted similarly as sodium chloride (common salt) in dyeing the vegetable fiber through exhausting the dyebath. This experimental report has not proven true in practical dyeing of direct colors, as the addition of mild alkalis, such as soda ash (sodium carbonate) or trisodium phosphate, to many of the direct dye solutions increases the solubility of that color and thereby decreases the exhaust rate and color yield for that particular direct dye.

Direct dyestuffs do not dissolve in aqueous solutions to the extent of forming true solutions under strict technical interpretation of the term "true solution," but can be classed strictly as colloidal solutions as the introduction of electrolytes such as salts start reformation of the minute dye particles into large size aggregates.

Direct dyestuffs vary in their degree of solubility; where some types require the addition of a mild alkali to the water for obtaining satisfactory solutions, other types may be entered directly in hot water with stirring. It is advisable to paste up all direct dyestuffs with cold or lukewarm water, then add hot water with stirring and boil up for a few minutes to obtain the best solutions.

Due to the ease of applying direct dyes, most dyers forget that regular and routine precautions must be observed in the preparation of the dyebath; otherwise the blame for poorly dyed lots cannot be placed on the dyestuff maker, but directly on the drug room and machine operatives who permit this type of carelessness.

Another routine precaution not usually observed is that of straining the direct dye solution into the bath; the writer has seldom observed the straining of direct dye solutions by hosiery dyers, but has noted that it is being increasingly carried out by rayon piece dyers as well as package yarn dyers. These dyers have realized the necessity of uniformly prepared solutions from lot to lot and this can only be obtained by careful pasting up with cold water, entering hot water with stirring, and then boiling up for a few minutes. Uniformly dissolved direct dye solutions will give more uniform exhaust rates than carelessly prepared dye solutions, as has been shown on many types of direct dyeing operations.

Common salt and Glauber's salt are the two chief direct dyeing assistants used, and their purpose is to exhaust the dyebath. Phosphate of soda is used on some of the bright direct yellows to give cleaner and brighter shades, while acetic or formic acid may be used on the bright greenish blues, such as the Direct Blue 8G type, to help exhaust the dyebath.

Wetting and leveling agents are another group of dyeing assistants or agents which have become of increasing importance with the widespread use of package and beam dyeing machines.

Sulfonated castor oil (monopole) was the pioneer assistant in this class and it now includes many types of agents prepared by sulfonating the higher fatty alcohols, blending sulfonated castor oil with steam distilled pine oil, as well as many highly complex organic compounds especially prepared for their wetting out properties on textile fibers, yarns and fabrics.

Several new compounds are now making themselves of real use to the dyers of direct dyes; these are classed under the term of cation active agents and are being applied as aftertreating agents to improve the cold water fastness of direct dyed yarns and goods as well as to impart a desirable "feel" to the finished product.

An older group of agents known as aftertreating compounds is now being used increasingly by dyers of direct dyes; these compounds include copper sulfate, bichromate of soda and formaldehyde, which are usually applied in an acid bath at temperatures of 120° F. to 160° F.

High-Speed Cloth Handling Discussed

Throughout the textile finishing industry it is common to transport cloth from process to process, and also through some of the processes, in either rope form or open width form. With increasing demands for high production and with improvements in processes and machinery have come successive increases in the speeds with which cloth is transported in these forms, and it has been found that the upper limits of speed are in general determined by the dynamic behavior of the cloth. It is not generally realized that some of these dynamic considerations cannot be controlled by mechanical design, and that they therefore impose an absolute limit on performance which no amount of refinement can be expected to overcome.

In the April issue of *Textile Research,* official publication of the Textile Foundation and of Textile Research Institute, Inc., the behavior of fast running cords is analyzed, with particular reference to the behavior of ropes of cloth encountered in a textile finishing plant. Theoretical formulas are deduced whereby the behavior at any point may be calculated, and from them practical deductions are drawn for direct use by the engineer.

British Group Ends Southern Tour

A commission representing the English textile industry has completed a two-week tour of the South which took them to the large textile centers of West Point, Ga., Greenville and Spartanburg, S. C., Charlotte, Kannapolis and Greensboro, N. C., and Danville, Va. The group of eight men was headed by Sir Frank Platt, cotton controller for the United Kingdom.

After Dunkirk, a third of all cotton textile mills in Great Britain were completely closed down for the period of the war to take labor to the munitions plants, Sir Frank said. Of the two-thirds still operating, labor continues to be taken away and only about 75 per cent of the machinery is operating, he added. The problem in his country is how to increase production per man hour, Sir Frank said. He pointed out his visits to mills in this country was to see how the problem was being solved in this country.

Stronger Rayons Being Developed

Research in the rayon industry is concentrating on the development of stronger rayon fibers and yarns and the production of rayons that will be even more versatile than those being made today, Dr. Charles S. Venable, director of chemical research, American Viscose Corp., stated in an address delivered April 14 before the Carolinas-Piedmont section of the American Chemical Society at Charlotte.

Present-day high tenacity rayons range in strength from 60,000 to 75,000 pounds per square inch, but post-war rayons will be still stronger and tougher, Dr. Venable said. Continued progress will be made, he stated, in developing special rayons to meet specific service requirements. Dr. Venable pointed out that rayon today is one of the great basic textile fibers and is produced in 22 countries, every industrially important country in the world.

Textron, Inc., has opened an office and showroom at 605 Wholesale Merchants' Building, Dallas, to serve Texas, Oklahoma, Arkansas, Mississippi and New Mexico.

PERSONALS

(*Continued from Page 34*)

Karl F. Inderfurth, assistant to the officer in charge of the inspection branch, Philadelphia Quartermaster Depot, has been promoted to the rank of captain. He is a Clemson College graduate.

Harry Riemer

Harry Riemer, for the past 27 years dry goods editor of *Daily News Record*, has been appointed editor of the publication. He will assume his new duties following a six-week combination business and vacation trip to the West Coast. He has been succeeded as dry goods editor by Herman S. Shaps, who has been connected with Fairchild Publications for some 20 years. J. Robert Breen, managing editor of the trade paper, will relinquish this post May 1 to join the Fairchild Washington Bureau.

Appointment of Alden H. Burkholder as assistant research manager and Emil Kline as chemical control manager has been announced by Industrial Rayon Corp. Mr. Burkholder has been with Industrial Rayon since 1929. He contributed substantially to the development of the company's revolutionary continuous process. Many of the fundamental inventions were Mr. Burkholder's and a number of the patents in this field are in his name. Dr. Kline joined Industrial Rayon in 1941 after some 16 years' experience in the various phases of rayon cellulose technology.

Sumner Simpson, president of Raybestos-Manhattan, Inc., recently announced the election of Harry E. Smith, general manager of the Manhattan Rubber Mfg. Division, Passaic, N. J., and Robert B. Davis, general manager of the Raybestos Division, Stratford, Conn., as vice-presidents of Raybestos-Manhattan, Inc., at a meeting of directors of the corporation in New York April 4. Both Mr. Smith and Dr. Davis are members of the board of directors.

D. D. Skinnell has resigned as night foreman of spinning at A. A. Shuford Mill Co., Hickory, N. C., to become night superintendent at J. & J. Spinning Mills, Maiden, N. C.

Ben C. Bailey, in civilian life connected with Frank G. North, Inc., of Atlanta, has been advanced to the rank of captain at the Boston Quartermaster Depot, where he is in charge of textile procurement.

E. A. Johnson, for several years assistant cloth room overseer at the Valley Falls, S. C., plant of Martel Mills Corp., has been named cloth room overseer of the Brandon Corp. plant at Woodruff, S. C.

William H. White, superintendent of the Ladlassie Plant of Gossett Mills at Anderson, S. C., will be his state's representative to the annual national meeting of the Improved Order of Red Men at Cleveland, Ohio, in September.

C. W. Gilchrist, president of Charlotte Chemical Laboratories, Inc., and E. A. Terrell, president of Terrell Machine Co. of Charlotte, have been appointed to the committee on patents of the National Association of Manufacturers.

Reginald L. Whitman, vice-president of Nashua Mfg. Co., New York City, has been appointed consultant and acting associate price executive to the primary products price branch of the Office of Price Administration's consumer goods division. The branch is responsible for the pricing of cottons, woolens, rayons, finished goods and various types of fibers. Mr. Whitman has had 30 years experience in the manufacturing of cotton cloth and woolen materials. He has been vice-president of Nashua for eight years. Previously he was vice-president, treasurer and director of the Esmond Mills, Esmond, R. I., for 14 years.

James A. Sherer, secretary-treasurer of Spindale (N. C.) Mills, Inc., has been granted a leave of absence to enter the United States Naval Reserve.

W. N. Williams, formerly assistant to the president of Westvaco Chlorine Products Corp., has been elected vice-president in charge of production. Mr. Williams, a Westvaco director since 1941, joined the company in 1924 in a production supervisory capacity and subsequently became general manager of Westvaco's West Coast

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operations. Transferred to New York in 1938 in an executive sales capacity, he became assistant to the president in 1941.

Robert R. Spilman, who before entering the Army was president of Appalachian Mills Co., Knoxville, Tenn., has been advanced to the rank of major at the Philadelphia Quartermaster Depot.

R. O. Arnold, treasurer and manager of Covington (Ga.) Mills, was chairman of the war fund drive of the Newton County Chapter of the American Red Cross.

J. McD. McLeod, formerly South Carolina representative for Victor Ring Traveler Co., is now assistant superintendent of the Modena Plant of Burlington Mills Corp. at Gastonia, N. C.

Election of three new vice-presidents by the board of directors of the Allis-Chalmers Mfg. Co. has been announced by the company. They are William C. Johnson, James M. White and William A. Roberts.

At a recent organization meeting of Bailey Meter Co. directors, E. G. Bailey, former president and company founder, was elected chairman. Robert S. Coffin, who succeeds him as president, has been vice-president since 1925, became identified with Bailey Meter Co. as treasurer at the time of its organization in 1916.

Sgt. William C. Batson, son of the general superintendent of Chadwick-Hoskins Co. at Charlotte, Culver Batson, has sent word to his parents that he is now raising a garden while not busy with Army duties at his Solomon Islands post in the Southwest Pacific.

Dr. James Edward Mills, chief chemist for Sonoco Products Co. at Hartsville, S. C., is this year's winner of the coveted Herty Medal, awarded annually in honor of the late Dr. Charles Herty for outstanding work in chemistry. Dr. Mills, who has been with Sonoco since 1934, will receive the medal May 6 at Milledgeville, Ga.

Ben G. Warwick

Ben G. Warwick has succeeded E. M. Hill as North Carolina representative for the finishes division of E. I. du Pont de Nemours & Co. He will be located at the company's branch warehouse in Charlotte, N. C., where he will be available for assistance in paint problems. Mr. Hill has been assigned to other duties within the organization.

Maj.-Gen. Edmund P. Gregory, the Army's Quartermaster General, will be honored by his home town April 25 when Storm Lake, Iowa, observes "General Gregory Day."

W. H. Bahan, president and treasurer of Bahan Textile Machinery Co., Greenville, S. C., is reported to be greatly improved after becoming ill recently at St. Petersburg, Fla. He is recuperating at Greenville.

C. W. Wilbanks, who has been connected with a number of textile mills in North and South Carolina, is now the South Carolina representative for Victor Ring Traveler Co., and will have headquarters at St. Pauls, N. C. William T. Horton, formerly of National Yarn Mills, Belmont, N. C., has taken over the Victor territory formerly handled by C. R. Duncan, who will enter the Army soon. Mr. Horton will have headquarters at Belmont.

Paul L. Goldstrohm and George M. Muschamp have been elected members of the board of directors of the Brown Instrument Co., Philadelphia, Pa., manufacturer of precision industrial instruments. Mr. Muschamp is vice-president in charge of engineering of the Brown company, a division of Minneapolis-Honeywell Regulator Co., and Mr. Goldstrohm is vice-president in charge of production.

Capt. Abner D. Potter, formerly a chemist for Burlington Mills Corp. at Greensboro, N. C., is now serving as ordnance officer at a Sixth Air Force base in Guatemala.

Stanley B. Hunt, editor of *Rayon Organon,* is a member of the estimates section of the marketing committee of the Committee for Economic Development.

Dr. Willard Henry Dow, president of Dow Chemical Co., will receive the Gold Medal Award of the American Institute of Chemists for 1944 at the institute's annual meeting in New York May 13. He is regarded as one of the leaders of research in this country.

Ensign J. D. Robbins, son of the Springs Cotton Mills Eureka Plant superintendent, E. F. Robbins, recently visited his parents at Chester, S. C. The Navy pilot, a graduate of Clemson College, has taken part in many battles in the Southwest Pacific area.

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POSITION WANTED by Textile Engineer. Draft free, 33 years old. Have made wide study of labor relations and personnel work; also safety engineering. Would like position that offers something after the war. Prefer textile plant in the Southeast. Address "Box C-O," care Textile Bulletin.

WANT job as head Card Grinder; draft exempt; plenty of experience. Would take frame fixing, or grinding job, day shift. Address "Box 22," care Textile Bulletin.

POSITION WANTED as Overseer Weaving. Eight years' experience as Overseer Weaving; I. C. S. graduate; 50 years of age. Family. Best of references. Prefer Piedmont Section. Six years as cloth room overseer. Address "Box H-18," care Textile Bulletin.

WANTED—A job as Overseer Spinning; 18 years' experience. Running present job with excellent results; 40 years old, married; draft status 3-H; strictly sober; A-1 references as to ability and character. Address "Box 100," care Textile Bulletin.

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Corn Shortage Causing Considerable Concern in Textile Industry

Considerable apprehension is current in the textile industry concerning the recent shutting down of several large corn refining plants which ordinarily supply a good portion of the starch used in sizing of yarns and finishing of fabrics. Present operations in the corn refining industry represent some 50 per cent of capacity.

Although the War Food Administration has increased from 35 to 60 per cent the quantity of corn that grain elevators are required to set aside for sale to essential industry, persons in authority have stated that larger supplies are not likely to be furnished because of various conditions.

Doubt has been reported to have been expressed by some representatives of corn processors that requisitioning alone would solve the problem. Their contention is that an increase in the ceiling price, which now is $1.16 a bushel, Chicago basis, is the only practical way to increase sales of corn from farms.

Last summer the problem was allowed to reach the point where most corn processing plants had to shut down, and many textile mills as a result also were threatened with closings. Only government action at that time in requisitioning market supplies and in putting on an intensive farm-to-farm campaign for increased marketing of corn averted the crisis.

Textile mills are facing a critical production problem. Pressure is being applied to obtain heavily increased production of textiles, but, because of a serious manpower shortage, the output of fabrics is declining at what many are inclined to feel is an "alarming" rate in view of the need for textiles.

The 15th Annual Statewide Industrial Safety Conference, sponsored by the North Carolina Industrial Commission, will be held May 18 and 19 at the Robert E. Lee Hotel at Winston-Salem. Nationally known speakers have been secured for the program, according to T. A. Wilson, chairman of the commission.

Nickerson Joins Parkinson Company

Elijah Nickerson, formerly in the sales department of Textile-Finishing Machinery Co., Providence, R. I., is now connected with Edward Parkinson Co., Inc., at West Warwick, R. I. The Parkinson firm manufactures new "Textile" tenter chains and also repairs all types of tenter clips. Other finishing plant items being manufactured include the electric cloth guider. This equipment is carried in addition to the firm's established line of loom forks, weaver combs, reed and drawing hooks. Mr. Nickerson will devote his entire time to finishing machinery problems. Officials of the company are Edward Clark, president and treasurer, and Lyman Stowell, assistant general manager.

Spinners Association Promotes Cotton

To further stimulate employee interest in production of materials for war uses, the Southern Combed Yarn Spinners Association has distributed the booklet, "Cotton Quiz," to every worker in the combed yarn industry. Each of the industry's 40,000 employees received the fact-filled booklet in his pay envelope for the week of April 9-15. Mrs. Mildred G. Barnwell, executive secretary of the association, stated that "it is our sincere hope that this will have some effect toward increased production."

Textile-Finishing Machinery Co. Sold

Receivers of the Textile-Finishing Machinery Co. have sold the Providence, R. I., plant to Jacob Ziskind of Fall River, Mass., a dealer in textile machinery. The company went into receivership last fall for the purpose of liquidation, following a desire expressed by stockholders to discontinue operations. Acceptance of the Ziskind offer was recommended by the receivers, J. Allen Harlan and Emery W. Lothrop, president and treasurer of the company, respectively. It has been pointed out that the company is "highly solvent," and that all claims to creditors will be paid in full.

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Keeping Up Production of Vat Dyed Piece Goods for Civilian Consumption

(*Continued from Page 30*)

(full diazotizing recommendations can be obtained from makers): Napthol Maroon—1.75 per cent Napthol AS-BR, developed, two per cent Garnet GBC Case; Napthol Bordeaux—three per cent Napthol AS-SW, develop, three per cent Fast Bordeaux GP Base; Napthol Orange—2.4 per cent Napthol TR, develop, seven per cent fast scarlet 2G Salt; Napthol Black (56 per cent)—2.5 per cent Napthol AS-SG, 2.5 per cent Napthol AS-SR, develop, five per cent Fast Red BN Base.

For Scotch box dyeing 900 pounds of cotton warp (kiered ready for dyeing), the formula for Napthol Red is as follows: 22.5 pounds Napthol AS-SW, 80 pounds Fast Scarlet R Salt; wet out two ends at 160° F., 20 pounds caustic soda, four pounds penetrant. Prepare napthol, using alcohol and necessary caustic, then add six pounds formaldehyde. Enter this into tank in four portions and run at 130° F.; first end one-fourth napthol in tank, feed in one-fourth during that end; second end one-fourth napthol in tank, feed in one-fourth during that end. Sample for shade by immersing a strand of naptholated yarn in Fast Scarlet R Salt solution, then soaping and drying. If correct, drop bath and develop.

For salt wash add 50 pounds salt, give one end through cold wash, develop cold, add two pounds of Diazopon to tank. First end 40 pounds Fast Scarlet R Salt, five pounds 84 per cent acetic acid. Second end 40 pounds Fast Scarlet R Salt, five pounds acetic acid, two pounds Diazopon. Check shade, and if suitable drop bath, give two ends cold running wash. Give two ends hot soaping, ten pounds soap, five pounds soda ash. Give two hot washes at 180° F., then cold rinse and finish up.

Napthol Orange is dyed similarly to Napthol Red, using 27 pounds of Napthol AS-TR, 96 pounds Fast Scarlet GG Salt. Napthol Maize makes use of 20 pounds Napthol AS-G, 60 pounds Fast Red RC Salt. No formaldehyde is used on AS-G. The naptholated warp must be wrapped to keep it from drying before developing is carried out. The developing bath is given four ends to insure level coupling. This formula is not satisfactory for light and medium shades. Similar napthol color combinations can be used on raw stock, package or beam, usually with adjustment for amount of acetic, acetate of soda and methods of finishing off necessary because of differences in machines.

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Du Pont Dye Works Bears Name of Pioneer Chemist

The dye works of E. I. du Pont de Nemours & Co. at Deepwater Point, N. J., one of the largest operated by the company, has been named the "Chambers Works" in honor of Dr. Arthur D. Chambers upon his retirement after 47 years service, E. G. Robinson, general manager of the organic chemicals department, announced recently.

Dr. Chambers has been a leader among American industrial organic chemists and was one of the group of pioneers in creating an American synthetic organic chemicals industry and in freeing this country from dependence upon Europe for dyestuffs after the last war. His recommendations led to the establishment 26 years ago of the plant now named for him. He became production manager of the organic chemicals department upon its formation and held the post until a year ago when he became production advisor. The operations in the company's plants for the manufacture of dyestuffs and intermediates, neoprene, tetraethyl lead for the Ethyl Corp. to be used in high octane gasoline, and many other synthetic organic chemicals were under his direction.

Born May 4, 1870, at Woodstock, Ontario, Canada, he attended local schools and entered Woodstock College in 1884, being graduated in 1888. He attended Columbia University from 1888 until 1892 when he received the degree of Bachelor of Arts. He received his Ph.D. in chemistry from Johns Hopkins University in 1896 after four years of study. His first employment was with the Standard Oil Co. at Lima, Ohio, where he spent nine months, leaving to join Du Pont as assistant superintendent of the Ashburn Mo., dynamite plant on Feb. 1, 1897. He became superintendent in 1905 and two years later was transferred to the Louviers, Colo., plant when it was opened in 1907.

After remaining there until 1915, he was transferred to the development department in Wilmington. In 1917 he joined the miscellaneous manufacturing department of which Lammot du Pont then was manager. The dyestuffs department and later the organic chemicals department were formed as the operations in this industry increased. Dr. Chambers had originally recommended that the company should engage in the manufacture of certain dyestuff intermediates. Plants for the manufacture of the intermediates were built and the new department launched. This step led to the greater developments which followed.

Dr. Chambers, who was presented with a watch by the Wilmington staff of the organic chemicals department at a dinner honoring him upon his retirement, is a member of the American Chemical Society, the American Institute of Chemical Engineers, and the Franklin Institute. He is married and two of his sons, Ivan F. and Ira D. Chambers, are connected with Du Pont.

Chemical Firm Buys More Property

Arnold, Hoffman & Co., Inc., has purchased a large lot adjoining its present property at Charlotte, N. C., for expansion of its plant as soon as possible, according to Walter Bunce, Southern manager for the company. A few months ago the firm bought a building to serve as its Southern headquarters. The newly-bought land consists of the vacant property on the north side of this building. The company plans to erect another building as soon as construction restrictions are lifted, said Mr. Bunce.

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COLUMBIA SPOTLIGHT

A STRIKING EXAMPLE of the growth of the chemical industry is found in the production records of Caustic Soda. In 1899—the year of Columbia's organization—total U. S. production of this chemical was 167,000 tons. By 1941—before the impetus of our nation's war needs—the chemical industry itself was consuming 220,000 tons of the total national production of 1,095,000 tons, and Columbia's Caustic Soda output alone exceeded the total 1899 production by a substantial margin!

U. S. Testing Co. Announces Plans for Summer Course

The accelerated course in textiles and testing techniques held yearly in the main laboratories of the United States Testing Co., Inc., Hoboken, N. J., will be repeated this summer. Marking the seventh year these special classes have been in session, this year's study will be geared to the varied uses, applications and values of textile testing. Originally planned to broaden and bring up to date theoretical textile studies, the course has grown to become a practical training period in textile testing. This particular curriculum has proved highly successful in that it has made possible the study of laboratory techniques and testing equipment otherwise inaccessible to many persons.

Within the periods scheduled for textile study, students will receive specific instructions in fiber, fabric and cloth analysis; the origin, identification and nature of natural and man-made fibers such as rayons, casein, vinyon, nylon, fiberglas and soybean, with sample swatches for reference; the testing of woven and knit fabrics for thread count, fiber identification and composition, tensile strength, seam slippage, color fastness to light, washing and dry cleaning; and studies on newly-developed equipment such as the Warmth Tester, Snag Tester, Fatigue and Friction Testers, Weather-Ometer, Flurophotometer and Osmoscope are important parts of the course. Emphasis is placed on familiarizing the students with A.S.T.M., United States Government, Army, Navy and other standards along the scope of service tests and their interpretation and use by industry and the consumer. Field trips to nearby industrial plants such as synthetic fiber plants, textile finishing mills and other testing laboratories are included in the course.

Again this year, as in the past, students will have the instruction of United States Testing Co. staff technicians working under the direction of G. R. Turner, supervisor of the company's textile laboratory, and instructor of a course in textiles at Columbia University.

Classes will be in session from 9 a. m. to 4 p. m. beginning July 10 and extending through July 28. A small fee to cover the cost of supplies, mimeographed text and samples necessary for the students' laboratory work will be charged this year. The class will be limited in number in order that it may have the advantage of individual instruction and the opportunity to work with actual testing equipment. Applicants are required to have some elementary textile training in order that a major portion of the three weeks may be devoted to an intensified study and use of testing apparatus. Applications, which may be obtained from the company's main laboratory in Hoboken, N. J., will be available on request to representatives of the fields of education, home economics and retailing who are invited to take the course.

National Starch Products, Inc., has purchased additional property adjoining its factory site on West Front Street, Dunellen, N. J., according to a company announcement.

This latest acquisition, coupled with National's recent purchase of a plot from the Standard Oil Co., and a parcel formerly occupied by the Plainfield Brass Foundry, rounds out the ownership of a tract of some 200,000 square feet. This action is in line with plans for the expansion of its Eastern manufacturing facilities, the company states. No new construction is contemplated at this time, however.

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Cotton Goods Market

New York.—The production and delivery of all cotton duck fabrics, 15 or more inches in width, have been placed under controls, the cotton branch of the War Production Board announced in Washington April 7. The action was taken to meet military requirements for cotton duck materials. Conservation Order M-91, as now amended, controls the production and delivery of all types of cotton duck fabrics, including shelter tent duck, numbered (wide or sail) duck, narrow or naught duck, hose or belting duck, filter duck or twills, plied yarn, chafer duck (chafer fabric) single or plied yarn, Army duck (including woven awning stripe), single or double filling flat duck, shoe duck, gem duck, bootleg duck, ounce duck, enamelling duck, cover duck, apron duck and harvester duck.

Concurrent with the amendments to M-91, WPB revoked the direction sent on Feb. 22, 1944, to all producers of Army duck (including woven awning stripe), single or double filling duck, shoe duck, ounce duck or enamelling duck, which instructed them not to sell or deliver after April 1, 1944, the above types of duck except on direct orders from the Army or Navy, the Maritime Commission or the War Shipping Administration. This revocation action was taken because Conservation Order M-91, as now amended, supersedes this direction.

It was pointed out, however, that the revocation of the direction of Feb. 22 does not in any way affect the direction issued March 24, 1944, ordering mills to increase production of Army shelter tent and numbered duck.

Conflicting rumors were circulated concerning the responsibility for slow deliveries on the 91,072,000 yards of cotton gray goods requisitioned by the Treasury Department, only one-third estimated to have been filled by mid-April. An explanation offered is that since a considerable part of this fabric is being delivered to manufacturers who are cutting, making and trimming garments for Lend-Lease shipments, it is necessary to have all details first ironed out between the government and manufacturers. Deliveries are expected from now on to be expedited.

Movement of goods in the cotton gray goods market has been of a limited nature recently, although considerable attention has been given over to lining up production for delivery on military contracts. This action was taken in anticipation of third quarter demands, which are expected to be made known shortly.

Fine goods production for some time to come will be almost entirely absorbed by government contracts, it is reiterated, with approximately 80 per cent of the entire output diverted to military needs, including Red Cross and Lend-Lease, and 15 per cent going to priority rated concerns.

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Cotton Yarns Market

PHILADELPHIA.—All cotton yarn manufacturers have been directed to produce cotton yarns in each quarter beginning April 1, 1944, in quantities at least equal to their maximum production in any quarter of 1943, the cotton branch of the War Production Board announced in Washington April 11. The action, taken in amendments to Limitation Order L-99, was said to be necessary in order to meet essential military and civilian requirements for cotton yarns.

The amended order provides that no manufacturer of cotton yarns shall operate in any quarter, starting April 1, 1944, at a rate of production which will result in the production of less cotton yarn than the greatest poundage of cotton yarn produced by him any calendar quarter of 1943. It was pointed out, however, that where compliance with the amended order would result in production at a loss, manufacturers may apply for suspension of the requirement. Any application for price relief must be filed with the secretary of the Office of Price Administration, Washington, D. C., and a copy with WPB. In event that the WPB appeal is granted, the requirements for increases above current production will be suspended until a decision is reached by OPA.

The United States Census Bureau reported April 14 that cotton consumed during March totaled 902,102 bales of lint compared with 811,274 of lint during February this year, and 997,422 during March last year. Consumption for the eight months ending March 31 totaled 6,804,272 bales of lint compared with 7,500,302 in the corresponding period a year ago.

Cotton consumed during March included, in cotton-growing states, 789,303 bales, compared with 714,846 during February this year, and 863,496 during March last year; and for the eight months ending March 31, 5,974,436 bales, compared with 6,496,623 for the corresponding period a year ago.

Cotton spindles active during March included: in cotton-growing states, 17,430,286, compared with 17,421,956 during February this year, and 17,482,282 during March last year.

A more intensive phase of the cotton yarn bottleneck has developed as regards supplies for use in the war effort, according to market reports.

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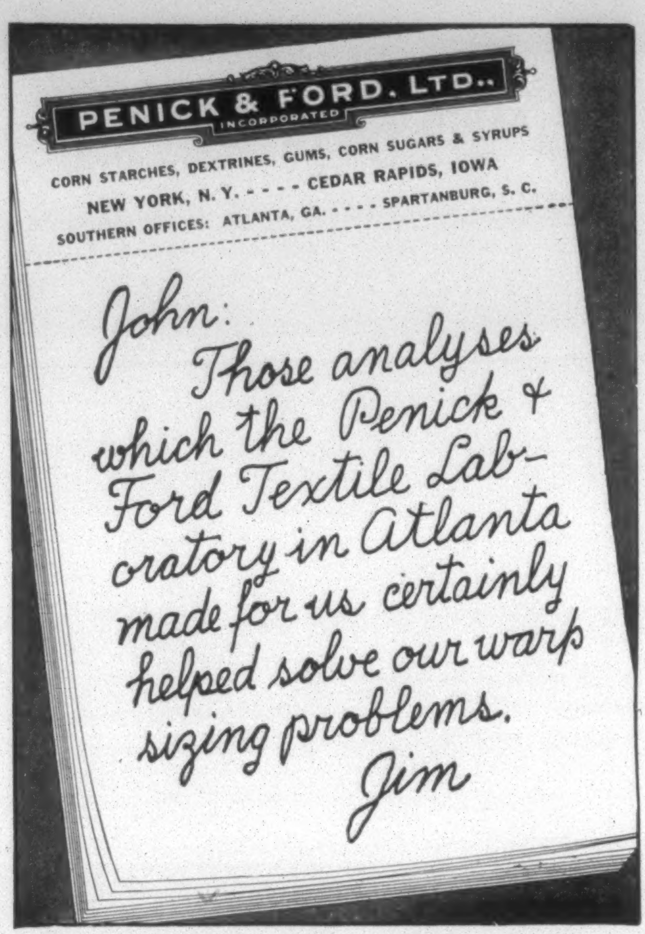

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Lessons in Fabric Analysis

(*Continued from Page 28*)

obtaining the dents in pattern. First, by using dividers as described previously, ascertain the repeat of pattern and then with dividers obtain the number of dents in each stripe in the pattern; second, by having a rule graded in 10ths, 16ths, 20ths, 32nds or 100ths. Measure each stripe separately in pattern with the rule, or measure with dividers; then lay dividers on rule to obtain width of stripe. If the dents per inch has previously been ascertained, then the dents in pattern can be found as follows: sample has 40 dents per inch, a stripe measures one-eighth of an inch; how many dents in stripe? 40 divided by 8 equals 5 dents. This can be repeated on all stripes in pattern.

Dents over all—By this is meant the dents occupied by the full width of fabric, selvages included. The dents over all are obtained by multiplying dents per inch by width of fabric. If the dents over all are divided by the width required in reed, the dents per inch in reed, or, in other words, the reed number is obtained.

Reed number—It has just been stated how to obtain the reed number. If the number of dents in fabric and the width in reed is known, it is very easy to obtain the reed number, but if the width in reed is not known, then more difficulty is experienced. Practically all fabrics are set wider in the reed than the actual cloth width; that is to say, the space occupied by the threads in the reed is wider than the cloth width, so that a reed has to be used that will give the right number of threads or dents per inch in the fabric. There are many rules given to find the reed number, but the shrinkages differ from such a variety of causes that it is an impossibility to formulate a rule to govern all cases. It may happen that where a mill is on a class of goods where the weaves and yarns used are somewhat similar to each other, rules may be formulated, and in many cases are, but the rule will only answer in this particular case.

One of the best methods of ascertaining the shrinkages is to carefully measure the sample and then take out a thread and measure it. The excess in length over the sample will be the shrinkage. This again can only be approximate, for if the thread is pulled tighter when being measured than it was when being put in the fabric, or is not held tight enough, the results will vary. Still, this is about the best method when a rule cannot be made. When a thread has been taken from a sample, it must be remembered that the shrinkage is on the length of the thread taken out and not on sample width. For example, a sample of cloth measures three inches, a thread taken from it measures four inches. What is the shrinkage? (Four minus three equals one-inch shrinkage of thread; one multiplied by 100 divided by four equals 25 per cent.)

(*To be continued*)

"Goodyear Engineering Data for V-Belts" is the title of a new and highly authoritative pamphet being distributed by the Goodyear Tire & Rubber Co. to engineers and engineering departments. Reprinted from Goodyear's famous "Handbook of Belting," the V-belt pamphlet contains complete details on care and installation of all types of V-belt drives. One section of the 33-page pamphlet is devoted exclusively to Goodyear's new steel cable V-belts. Goodyear's decision to reprint only the "Handbook of Belting" section which deals with V-belts was prompted by current national efforts to conserve paper and manpower.

Members of S. T. A. Division Exchange Weaving Information

(*Continued from Page 24*)

fixers use gauges. If each man uses a gauge for his stroke in setting his pick and his batteries they will be doing the same work and will not be undoing each other's work. If we can do that it will be like having one man do all the fixing. The fixers do not like it; it takes a little more time and trouble, but in running three shifts we should do it. Otherwise, if we run three shifts indefinitely we shall get into serious trouble.

MR. KAY: The difficulty in using gauges is that the rocker bearing has been put on the loom, and maybe it is a half-inch higher on one side. To put on the gauge we have to loosen the rocker bearing. If you change you are way off the standard in the rocker bearing. What are you going to do—that is on looms that have been running for 35 or 40 or maybe 50 years?

MR. HENDERSON: The only thing you can do there is to bring the lay up to gauge and, if necessary, drill new holes.

MR. KAY: The trouble is you need new bearings. The Draper Corp. probably would not agree to make a different type of bearing for me, and I would have to get a rig and do it myself in my shop.

MR. HENDERSON: The only thing I can say is to drill new holes.

MR. KAY: You have to stop the holes up.

MR. HENDERSON: Well, pin them up. If you are going to keep that loom another 35 years you had better do that.

MR. MCCALL: We have two men who do nothing but use gauges on old looms. We have the same trouble Mr. Kay talked about in buying rocker boxes with holes bored inside. The holes are bored to a jig, and we are not expecting to have any trouble at all, because we are stopping up the old dowel-pin holes.

MR. LOCKMAN: You are getting a special bearing?

MR. MCCALL: The reason we are buying it is because we are getting two sets of holes. We have not been experiencing any trouble up to now. I might add that we have to rebore new dowel-pin holes, of course, in order to get these pins in.

MR. MAYFIELD: We have an E model loom that started with a 6¾ quill, and now we use 8¾. We have tried to gauge it but have not been very successful. We also have a lock battery—No. 13 battery. A program was started a few years ago to replace those. We have had the loom fixers on that for some time who like those batteries, so we have quit buying the others and are getting along very successfully.

MR. LOCKMAN: "How do you train your weavers? Loom fixers?" There is a lot of that going on. Whether you men will tell about it, or not, I do not know; but you have to do it every day. No one has enough help. Who has an extensive program on this?

HAROLD HARRELSON, training director, Drayton Mills: For training our weavers we have eight looms set aside, and we train them up there for about two weeks. Then we have graduated sets in the weave room, 25 per cent, 50 per

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cent, etc. We transfer them down there from the preliminary school. It takes about eight weeks there—two weeks on each set. We have pretty good success with it.

MR. LOCKMAN: How long do you keep them on the preliminary set?

MR. HARRELSON: Two weeks.

MR. LOCKMAN: Two weeks there, two weeks on the 25, two weeks on the 50. In eight weeks they go on the full set?

MR. HARRELSON: Ten weeks.

MR. HENDERSON: I was talking to a superintendent recently who is going to initiate a program of teaching learners to fix. His idea is to have two sections of looms, with one good loom fixer and two apprentices. Maybe it will work out to one loom fixer and three apprentices. As they improve, of course, he will move them over. I thought it sounded very interesting. How it will work out I may be able to tell you later.

MR. LOCKMAN: "What is your method of reducing the number of absentees?" That is a problem that is bothering everybody, and all of us are trying to do something about it. Someone who has done a good job on that tell us what he does.

FRANK D. LOCKMAN, superintendent, Clinton and Lydia Mills, Clinton, S. C.: My opinion is that smoothly running work will reduce absenteeism more than anything else you can do.

MR. BOYCE: I should like to know if anyone has tried a nursery—a place for the children to stay during work hours when the mother is working. We do not have that, and I should like to get the experience of someone who has.

J. H. HUGHES, loom fixer, Clinton Cotton Mills, Clinton, S. C.: We have a nursery, and it works very satisfactorily. The meals are cheap, and the children get excellent food and the proper care. We have a welfare worker there who takes care of them. It is very successful.

MR. SNODDY: We have a nursery that is being operated for the first shift.

MR. LOCKMAN: That is a government-financed project?

MR. SNODDY: Yes, sir. We think in our place it would be much better if it could be handled on the second shift.

MR. LOCKMAN: You need it much worse on the second and third than you do on the first?

MR. SNODDY: Yes, sir. Another thing; we have a lot of people who do not live in our village. They are scattered all over four or five counties. It would not be fair to the children if we had it. But from the first shift standpoint it is good.

MR. LOCKMAN: Let's go on with our questions. "What type of stop motion, mechanical or electrical, gives the best results both to weavers and to loom fixers?"

I judge this mechanical motion is the latest type stop motion—what we call the saw tooth. That is the saw-tooth Draper stop motion as compared to the electrical stop motion.

MR. HENDERSON: Personally, I think the sliding-bar warp stop motion is the most beneficial all around, especially to the weaver, because he can find the thread much quicker than with any electrical stop motion. For that rea-

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son I think it is better. I shall qualify that by saying that on a wide loom I should rather have the electrical, though it takes more time to find a thread or hitch back.

MR. MCABEE: Mr. Chairman, why don't you bring the warp man into this picture?

MR. LOCKMAN: Most of our fixers in this section are tying the warp. That is what you have in mind, isn't it?

MR. MCABEE: Yes, sir.

MR. LOCKMAN: I think that is true in most cases. Whether it be fixer or warp man, I think it is whoever puts the warp on the loom and which is less trouble to handle and which will cross up the wires least—the drop wires. I wish whoever has had experience with these would tell us about it.

MR. MCCALL: I have had experience with both of them. I prefer the electrical to the mechanical stop motion for several reasons. It is true that the weaver can find the end quicker with the mechanical, but the problem is how to make the weaver do good back weaving. The electrical stop motion, in my opinion, will do that.

QUESTION: Why will the electrical stop motion cause him to watch the backs more?

MR. MCCALL: Because the drop wire will stop his loom, and it will not take him long to get back there and fix it.

MR. MACE: I think that depends upon the model of the electrical stop motion. We use the newer type, and my weavers and fixers like it much better.

MR. LOCKMAN: Do you have your looms individually fused?

MR. MACE: Some.

MR. LOCKMAN: That is a factor in using the electrical stop motion. Where you have two or three hundred looms on one fuse it causes trouble.

A MEMBER: We use the electrical stop motion because, as I think it has been stated, they do not wear out. The only trouble we have is where someone blows the fuses. We are going to have ours individually fused as soon as we can get the material.

MR. BOYCE: I should like to ask a question. Is the quality, with the electrical stop motion, better than with the mechanical? I find that with the electrical stop motion we have fewer long runs—threads running the wrong way, because of the blow-off. Generally we have a lot of cotton in there. With the electrical stop motion there is nothing there to hold the cotton.

MR. LOCKMAN: Mr. Boyce's question is with which do you get the better quality of cloth, the electrical stop motion or the mechanical stop motion, all parts considered.

MR. HENDERSON: Talking about long runs, that must have happened on the old-type stop motion. It would not be fair to compare that with the new type, either electrical or sliding bar.

MR. CAUGHMAN: While we are friends of the Draper Corp., I would not say that the No. 2 sliding bar will not accumulate lint. It was doing the job, but it will accumulate dirt and lint in there. It was simply not being blown out.

As to the question of quality, we had 108 looms of one particular type that we put the stop motion on. In all fair-

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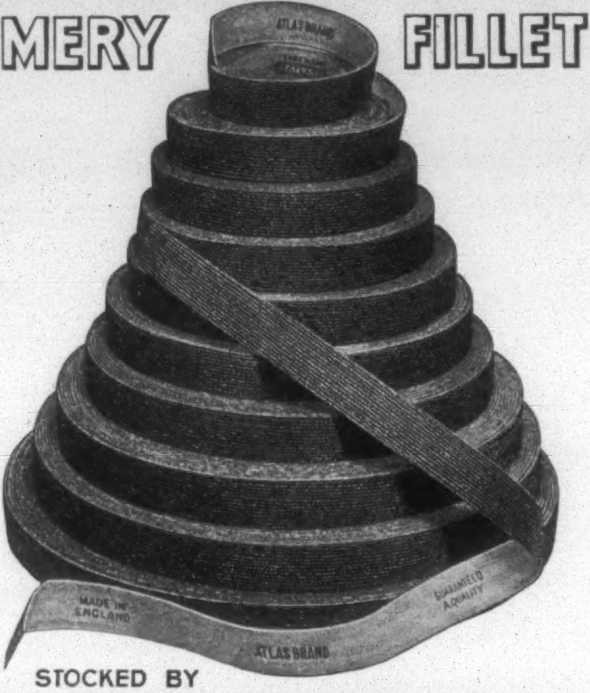

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ness to the Draper stop motion, it was a worn-out stop motion. The efficiency improved around three per cent, and the quality came right along with it. Maybe by next time we can give you a still better picture or actual comparisons, because we are going to replace another block of 108, where the stop motion is good; and maybe by the next meeting we can give you some comparisons.

MR. JONES: I have had a little sad experience with the electrical stop motion. In putting on the stop motion, at first it worked fine; but if you do not watch your contact bars it will get clogged up with size and lint, and you will still have your run threads. If you put them on and think your trouble is solved you will be disappointed.

O. W. MCGEE, overseer of weaving, Monarch Mills, Lockhart: For the saw-tooth bar we have a probe made from a heddle bar; and occasionally, perhaps every two or three runs, we have the warp man or loom fixer run that probe through there and clean the lint out. I think we get along a whole lot better with the mechanical than we do with the electrical stop motion.

A MEMBER: If you remember, some years ago dyers and finishers had a lot of trouble with what they called dye crack. We changed some looms to the electrical stop motion and eliminated that. There has been some discussion about that, as to whether it stretched the yarn or whether the characteristics of the yarn were changed.

MR. SNODDY: I have some bad drop wires and bad electrodes. How can I get rid of them without throwing out everything?

A MEMBER: Rig up an electric light bulb and test them.

MR. HENDERSON: My position on the relative merits of the electrical and the sliding stop motion is that the electrical stop motion favors the fixer, and the mechanical stop motion favors the weaver. The fixer contacts the stop motion once a month; the weaver contacts it once a day. You can see how your production is affected by that.

MR. LOCKMAN: "What is a good shuttle life on looms running 192 p.p.m.?"

MR. HENDERSON: In my experience with cotton mills, both in the South and in New England, 2,000 to 2,500 hours for a dogwood shuttle is good.

MR. MCABEE: What is the construction of the cloth?

MR. HENDERSON: Any average construction. The condition of the loom is the important thing. We used to figure, in the single-shift days, one year per shuttle. That ties up with now.

MR. MACE: I can give you my experience. On 450 looms it is 5.2 shuttles per year per loom. That is with the Stafford thread cutter, with 44-40, 56-60 construction.

MR. MCABEE: Is that with an 8¾ quill or eight-inch?

MR. MACE: Eight-inch.

MR. MCABEE: Would the length of the quill have any bearing on that?

MR. HENDERSON: No. The leeway there of 500 hours will take care of that.

MR. LOCKMAN: "Has a better fillet than tin been found for covering take-up rolls on print cloth looms?" Who has tried something besides tin on them?

A MEMBER: We have tried some of that new covering. I believe Mr. Allison can tell us something about that.

MR. LOCKMAN: How about it, Mr. Allison.

MR. ALLISON: We just ran a very small test on this aluminum-coated cloth that the Carborundum Co. is putting out. They have it graduated for various types of goods. Of course, it does not rust. Humidity does not affect it at all. You can glue it on. I have not carried it far enough to find out whether it will run all right or not. Beaumont Mfg. Co. is using some on duck. I do not know whether any of their men are here or not. If they are, they can tell you more about that than I can. It looks, though, as if the aluminum-coated cloth is going to give as good service as the tin, or better.

B. LOWE, second hand, Beaumont Mfg. Co., Spartanburg: We use that, but I have not noted any particular difference.

MR. LOCKMAN: Well, is it satisfactory?

MR. LOWE: Yes, sir, it is perfectly satisfactory.

MR. LOCKMAN: What is the difference in cost?

MR. LOWE: I really do not know. We have been using it on the beam. I really do not notice any difference.

MR. LOCKMAN: You use it on duck?

MR. LOWE: Yes, sir. We use it on print cloth, too.

MR. LOCKMAN: You have not had any bad experience at all?

MR. LOWE: No, sir.

MR. LOCKMAN: Has anyone else any information to give us on that?

MR. MCABEE: This question may be out of line, but while we are discussing covering I should like to know if anyone can tell me the correct covering for terry looms.

MR. HENDERSON: On all the terry looms I know they have this fillet covering. It is necessary to have a bar there. That bar there lays down the pile.

MR. MCABEE: Is it possible to run two felt rolls?

MR. HENDERSON: I don't know. All I have seen have a bar to lay the pile down.

MR. PRESSLY: I should like to go back to the sliding bar. On 80 squares we have plenty of trouble. How do you clean the sliding bar stop motion and keep it clean?

MR. LOCKMAN: Mr. McGee, over here, says he cleans his about every two or three warps. You know you can raise it up. He takes a little hook made from a heddle reed and scrapes it out. It has to be done every two or three warps. That does give good results. It is a constant job, though; you cannot do it once and then stop.

QUESTION: That takes an extra man, doesn't it?

MR. MCGEE: No, the fixer does it. It takes only about five minutes.

Directors of American Viscose Corp. at their regular meeting April 5 declared dividends of $1.25 per share on the five per cent cumulative preferred stock and 50 cents per share on the common stock, both payable on May 1, 1944, to shareholders of record at the close of business on April 17, 1944.

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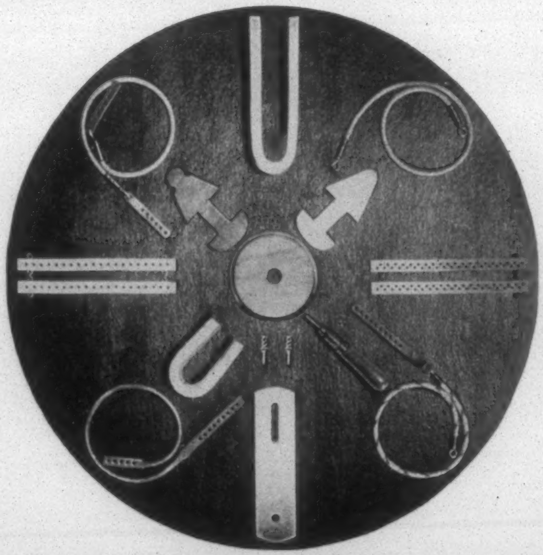

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Southern Representative
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Samples On Request

Cotton Mill Men Give . . Put Out . . Produce . . Get the Pounds!

(*Continued from Page 18*)

not a contraption." I was talking to the head of one of our big machinery companies a few days ago, and he told me that practically no new development has been made in the last few years in the type of machinery that he builds. You machinery people scratch behind your ears—get out the old slide rule, and get down to the old whiffletree, and think up something smart. Show some brains.

A few days ago Lieut.-Gen. Somervell made a magnificent gesture to our industry. He invited a group of men, a cross-section of the textiles, to come to Washington and meet with him and his associates for a morning's discussion of the high lighted problems that we are faced with.

Among other things, they let us have the story on the termination of contracts. Their men have done a prodigious amount of work trying to get this phase of our economy in shape come the time to terminate. They sent us away armed with their statement on this subject. It was so voluminous I could hardly tote mine. They are trying to do right. General Somervell and associates impressed me with the thought that they realized that we have our problems and they want to help us to get around them as best they can—certainly they do not want to create unnecessary problems.

It seems they are making definite plans to get away from renegotiation and to substitute "forward pricing." I will state again that I am glad to turn over my work in this connection to the incoming president. May God have mercy on him when they "forward price" him and whack his termination in two. You must know that many private companies and associations and manufacturers are spending a lot of time and thought and effort on the question of termination of contracts.

I won't dwell on Lend-Lease because I don't know anything about it. I hear about Lend-Lease and reverse Lend-Lease. I am saying this: you can take the products of my labor, divide it as you will, under whatever plan you will, taxes of all types, renegotiations, contributions of various sorts, but whatever you do, you, the government, don't take my job. I understand the question that is in the worker's mind more than any other is "job security."

In New York a few weeks ago at the directors' meeting of the Cotton-Textile Institute the news was brought to us that Mr. Donald Nelson didn't have a good clear picture of what was going on in the minds of operators of cotton mills. Therefore, a committee was formed out of the National Cotton Manufacturers Association, the institute and the American Association, a small committee of, I think, ten men, to be known as the increased production committee and to meet with Mr. Nelson the next week in Washington. The date of the meeting was fixed to coincide with the return of a so-called "task force" made up of three men, one each from the War Manpower Commission, the OCR and the WPB. These men had made a very broad circle and intensive visit to Southern mills to discover anything that could, if brought to light, be put into use and cause an increase in production.

In the management of mill problems we must watch closely what we tell the other fellow to do. We must be very careful in our gauging and judging of the other fellow's loyalty to his work and patriotism to his country. Let's take one little light look at this absenteeism business and see who it applies to. How much time off do we take from our work? What are we doing on Saturday? Where were you last Sunday? When is the last time you saw your third shift? When is the last time you walked through your mills, not with an eye out for smelly bearings, looms with warps out, noticing for humidity and ends down, but just to walk about and speak to people—say hello—howdy do?

What are you doing about housekeeping? Are your floors clean, lint on the frames, bobbins on the floor, spools laying around? Are the employees impressed with the fact you are trying to keep the mill clean?

I am impressed with the value of production of a safety program. I am going to uncover here a trophy that I would like to offer each year to that mill in the association who has been judged the mill that has done better from all angles of safety in their safety work than any other mill in the Southeast. Of course, primarily from results obtained, but not just from results but from effort and attention. We hope that during the year we can set up a safety contest that will compete for this trophy.

Have you got a nutrition program? Do you know what is in your lunch wagons, or dope wagons as they are called? What kind of shape are your toilets in? Imagine if you were an employee it wouldn't make you feel good to walk into your mill toilet at 3 o'clock in the morning, kind of sick, and it comes across your mind, "why this place is not kept clean?" People respond to the other fellow's *efforts.*

Have you made sure that the employees of your plant are looked after by competent doctors and have the best medical attention?

Have you got a good credit union? Are your people able to get hold of small loans—and don't fool yourself about the amount of money your employees are getting and therefore not need loans—they need them right along.

Have you set up in your mill plans whereby plant grievances can get out to management and get settled promptly and without a lot of hullabaloo? And don't think the minds of your workers are not full of good ideas and plans to get out more production and better quality and to help you with all your problems. Their minds are full of ideas and plans and any net you set out to gather these ideas will certainly be pulled in "full to the brimming."

How does your work run? Are your speeds up to standard? Are cylinders laying on the floor? Are your warps out? Are your frames standing waiting for roving? Are you working to keep in balance, are you making good yarn: what's the percentage of your production? All these things come smack back into the lap of management.

Let's be mighty careful how we discuss absenteeism because you know we really can be absent from our jobs sitting at our desk counting our toes and enumerating the unpleasant things that are happening to us. Let's give our mills a chance to run by running them. It's a remarkable thing about a cotton mill—the thing won't run by itself. Its got to be made to run.

What kind of learner program have we got? I am impressed with the fact that there are many people around our mills today, good people, who if we approached them properly and intelligently, could come into our mills and help get out the pounds. *Cotton mill men—Give . . Put Out . . Produce . . Get the Pounds!*

I think we have done a good job and beginning to do a better one.

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When you are searching for the right belt for the right drive . . . with the idea of keeping efficiency high and maintenance low . . . your best chance of finding it is by going to the firm that has *experience.*

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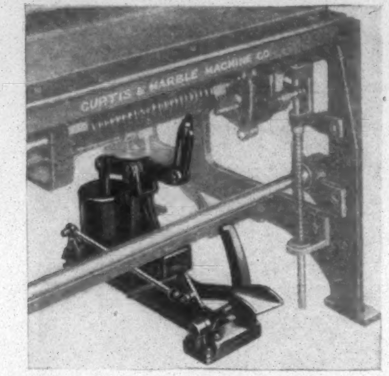

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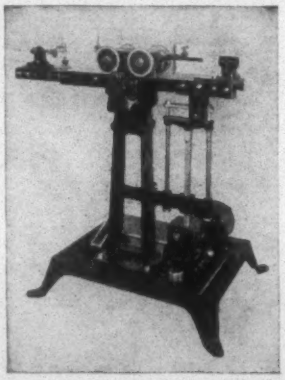

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Scott Tester results are in terms familiar to technicians everywhere—in fact, numerous standard tests were derived from our machines. 60 models from single hair to 1 ton for tensile, hysteresis, flexing, burst, crepeage, twist, etc., etc.

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Viscose Raises Rayon Yarn Prices

American Viscose Corp. is raising the price of its standard viscose process rayon staple fiber, in both bright and dull lusters, by one cent a pound to 25 cents. This restores the price of the bright type to the ceiling level, but the price of the dull type is still one cent below the ceiling.

The price of the company's higher strength rayon staple fiber, "Avisco," in 1.5 denier and heavier types, is changed from 25 cents to 26 cents a pound, while the price of "Avisco" in 1.25 and 1.0 denier types remains unchanged at the former level of 26 cents a pound.

The new price of standard bright viscose rayon staple fiber, 25 cents a pound, is the price in effect in May, 1943. The new price of standard dull viscose rayon staple fiber, also 25 cents a pound, is one cent a pound less than the price in effect in May, 1943. The prices of all special types of rayon staple fiber, such as acetate staple fiber and "Tufton," and the price of rayon tow, remain unchanged.

OBITUARY

E. C. HOLT

Edwin Cameron Holt, 83, prominent retired textile manufacturer of Burlington, N. C., died suddenly last month of a heart attack. Mr. Holt was one of the pioneer industrialists of his section, having participated in the establishment of several large firms. He is survived by his wife, one daughter and one sister. Funeral services and burial took place at Burlington.

LIEUT. H. H. WILSON

Lieut. Henry H. Wilson, 28, formerly a foreman at Clark Thread Co. of Georgia, Austell, died recently when the bomber he was piloting was shot down over Brunswick, Germany. He was a graduate of Georgia School of Technology. Survivors include his wife, three sisters and a brother.

T. G. JOSLIN

Theodore G. Joslin, 54, director of public relations for E. I. du Pont de Nemours & Co., died of a heart attack April 12 in his office at Wilmington, Del. A noted Washington correspondent for newspapers and national magazines, Mr. Joslin left the journalistic field five years ago to head the Du Pont public relations department. Since joining the company he had appeared frequently before industrial and trade groups as a speaker. His wife, Mrs. Rowena Hawes Joslin, survives, as do two sons, Richard H. Joslin of the Du Pont nylon division, and Lieut. Robert E. Joslin of the U. S. Army.

PACKAGE DYEING AND BLEACHING

All Type Colors on Cotton Yarns

PIEDMONT PROCESSING CO., Belmont, N. C.

John L. Dabbs Honored By Du Pont Upon Retirement

John L. Dabbs, former Southern sales manager of the dyestuffs division, organic chemical department of E. I. du Pont de Nemours & Co., Inc., retired April 1 from active participation in the affairs of that company after approximately 25 years of outstanding service.

John L. Dabbs

In his long and colorful career, Mr. Dabbs, in addition to his activities in the dyestuffs and chemical field, has held practically every position in a cotton manufacturing plant. He entered the industry as a young boy in Rock Hill, S. C., and gradually advanced to the position of superintendent. Due to his unusual skill in the dyeing of textiles, he was offered and accepted a position in the capacity of technical demonstrator with Berlin Aniline Works, one of the pre-World War I dyestuff manufacturing concerns. In the early days of the first world war, when the supply of dyes was quite scarce in this country, he was one of the pioneers in the manufacture of American-made dyestuffs. He operated a plant for the Klipstein Co. in New Jersey and was among the first domestic manufacturers of sulfur black. He was later employed as Southern sales manager of National Aniline & Chemical Co., located at Charlotte, N. C., and in June, 1919, resigned in order to organize the Southern sales office of the Du Pont dyestuffs division, also located at Charlotte. During the following decade he witnessed the phenomenal growth of textile manfacturing and finishing plants in the South and had an active share in the important part that dyestuffs and textile chemicals occupied in this growth. Mr. Dabbs' long association with the dyestuffs and chemical field has made his name synonymous with this industry throughout the South, although over the past few years he had been forced to curtail his activities due to the condition of his health.

On March 31, upon the occasion of a sales conference, Mr. Dabbs was honored by a luncheon at the Hotel Charlotte which was attended by all of the members of the Southern office, and he was presented with a silver vase upon which was engraved the signature of every member of the organization, including the signatures of 19 members who are now serving in the armed forces.

Mr. Dabbs has been succeeded as Southern sales manager by D. C. Newman, who assumed the managerial duties on April 1, 1941. Mr. Newman served in the capacity of assistant Southern sales manager for the previous 14 years.

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TEXTILE OILS – HEAVY CHEMICALS

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HEDDLES

Successfully Meet the Straight-Line Test

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Take any pair of duplex heddles and place them in right and left position, as in the picture at the right.

A straight line, laid through the rod openings at the two ends of the heddles, should lie parallel with both heddles, as it does with all . . .

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This is due to superior designing and to the rigid character of the flat metal in all Walker Heddles, which makes them keep their shape on the loom—a very important factor in trouble-free weaving.

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American Supply Co.	Providence, R. I.
R. D. Hughes Sales Co.	Dallas, Texas
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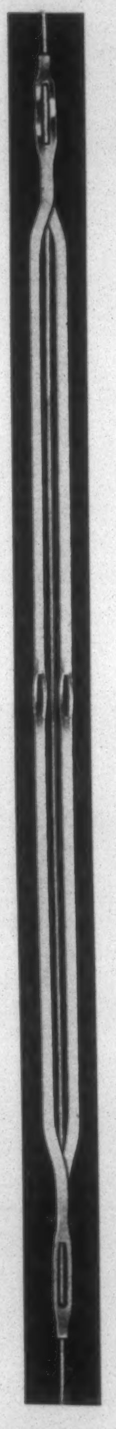

Results of Textilene Wash Tests Released By U. S. Testing

The rug and carpet trade has been following the news stories on Textilene with all the eager interest of a first-time parent. This revolutionary weaving yarn now brings some more headline news for the floor covering trade. Another group of Textilene-backed carpets are back from United States Testing Co. where they are given some rigorous tests in rug-cleaning processes. These carpets were "put through the wringer" and rang up some new honors. They proved themselves in earlier wash tests and now, in confirmation, comes the latest report—Test No. 50548, Feb. 17, 1944:

Four Textilene-backed carpets were taken to a reputable carpet cleaner. They were run through the beater to remove as much dirt as possible. Then, they were thoroughly wetted with water, scrubbed with a rotary brush using a soap solution and rich lather. Excess soap was removed with a wood squeegee, and the carpets were flushed with clean water and squeegeed again. The carpets were then passed through a wringer and hung in a dry room with a temperature of approximately 120° F. The testing company reports that the cleaned rugs were then examined and the Textilene yarns were in as good condition after cleaning as they were originally. The examination also showed that hanging the rugs with strain on the Textilene yarn had no apparent effect on these yarns or the carpets in which they were used.

On cotton throw rugs, too, the U. S. Testing Co. sends an interesting news release. Everyone knows that cotton throw rugs have always had a tendency to "kick up" following the wash, become knotty and wrinkled. Textilene-backed rugs, as reported in Test No. 48987 (Jan. 6, 1944) hold their firm body, weather the wash with no ugly crinkling or undue shrinkage. There were no adverse reactions in the Textilene yarn. The wide adoption of this remarkable basic material marks a notable advance in rug manufacturing. Textilene is an all-American product, relieving manufacturers of worries about jute—a foreign product which was delivered from thousands of miles away. Textilene is a tough-fibered cellulose base product.

Textilene-backed rugs being given the squeegee treatment to remove soapy lather used in wash tests.

WHEN YOU CHECK UP ON YOUR PLANT'S PAY-ROLL SAVINGS PLAN FIGURES!

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A number of other groups may need attention. For example, workers who have come in since your plant's last concerted bond effort. Or, those who have been advanced in position and pay, but who may not have advanced their bond buying accordingly. Or even those few who have never taken part in the plan at all. A little planned selling may step contributions up materially.

But your job isn't finished, even when you've jacked participation in your Pay-Roll Savings Plan up to the very top. You've still got a job before you—and a big one! It's the task of educating your workers to the necessity of not only buying bonds, but of *holding* them. Of teaching your people that a bond sold before full maturity is a bond robbed of its chance to return its full value to its owner—or to his country!

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War Bonds To Have And To Hold!

LET'S ALL BACK THE ATTACK WITH WAR BONDS!

The Treasury Department acknowledges with appreciation the publication of this message by

TEXTILE BULLETIN

This is an official U. S. Treasury advertisement—prepared under auspices of Treasury Department and War Advertising Council

Association Promoting Export of Piece Goods To Foreign Countries

The Textile Export Association in a statement this month took issue with the recommendations of the National Association of Shirt and Pajama Manufacturers which recently asked the War Production Board to revise the government's export program so that clothing, garments and apparel manufactured here will be shipped abroad in place of piece goods. William C. Planz, president of the textile group, asserted that most foreign markets have traditionally bought piece goods alone, and only a few have been in the habit of buying ready-made garments and then only in small quantities. Markets that regularly purchased garments, he said, are still receiving small quantities, the amounts being reduced in the same proportion as imports of piece goods.

"Duties on ready-made garments are much higher than on piece goods and this factor alone will continue to impede any efforts to develop outlets for ready-made clothing in foreign markets," he declared. "Practically all foreign markets have their own individual styles and most of them are opposed to being compelled to buy our garments. In order to open up markets in countries where our garments have not been traditionally sold, garment manufacturers here would have to study the style requirements of these markets, cut now patterns and make their garments accordingly. With the manpower shortage in the United States so grave, it would seem that our manufacturing facilities and labor supply should not be burdened with unnecessary manufacturing, especially when it can be done in the markets that regularly buy our goods. In many instances the economy of foreign countries, especially those at a low level of industrial development, requires that the manufacture of garments be done locally in order to employ people whose industrial skill is confined entirely to needlework. These same countries also encourage as much manufacturing of this sort as possible in order to level off the sharp fluctuations in trade balances that mark the economy of countries which rely mainly on the export of agricultural products for a livelihood."

Philadelphia Depot Is Honored By Club

More than 400 persons were present at a dinner March 23 in New York, given under auspices of the Textile Square Club, honoring the Philadelphia Quartermaster Depot and its commanding officer, Brig.-Gen. Roland Walsh. The dinner was the third annual function of its kind, and offered as chief speakers Hugh M. Comer, president of the American Cotton Manufacturers Association, and William M. McLaurine, the association's secretary-treasurer.

Response of the textile industry to the military demands have been more than adequately met despite the heavy strain upon the production facilities of the mills, speakers emphasized. However, the demands to be made upon producers will not be abated until such time as victory is definitely in sight, it was further emphasized. Seated at the head table in addition to General Walsh, Mr. Comer and Mr. McLaurine, were members of the staff of the general, textile association executives and market leaders, occasioning a most representative gathering. Harry Riemer of *Daily News Record*, president of the Textile Square Club, was master of ceremonies.

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Armstrong Report Reflects Firm's Vast Amount of War Work

As a result of intensified production of munitions and other war goods, domestic sales of Armstrong Cork Co. in 1943 rose sharply to $111,646,983, the highest level in the 84-year history of the company, H. W. Prentis, Jr., president, reported recently in a statement to stockholders.

Net earnings after taxes amounted to $3,667,026 as compared with $2,964,384 for 1942. Income before taxes in 1943 was $7,385,346 as contrasted with $4,866,787 in 1942, when domestic sales totalled $82,704,879. Provision for Federal income and excess profits taxes in 1943 amounted to $3,718,320. Earnings per share of common stock, on the basis of domestic earnings alone, were $2.45, as against $1.95 in 1942. The combined net income of the foreign subsidiaries in 1943 was $29,538.

The record-breaking sales volume was due primarily to the fact that the munitions division more than tripled its business over the preceding year, Mr. Prentis reported. The sales of munitions in 1943 amounted to $36,053,840, compared with $10,285,000 in 1942 and $580,000 in 1941. Mr. Prentis estimated that 63 per cent of all the products sold by the company during 1943 were for military purposes and 27 per cent for essential wartime civilian needs.

The report gave 1943 production statistics for some of the munitions items produced by the company, including: processing of 30,170,000 square yards of camouflage material; coating of 2,950,000 yards of Army duck for tentage and tarpaulins; machining of 23,150,000 shells in sizes from 20 mm. to 105 mm.; casting of 4,790,000 magnesium incendiary bombs; fabrication of 730,000 cluster racks for bombs for aircraft; manufacture of 1,250,000 anti-aircraft cartridge cases; production of parts and sub-assemblies for more than 5,750 military planes.

Discussing the immediate outlook for the munitions division of the company, Mr. Prentis declared that "due consideration has been given to the likelihood that contracts for war materials may be cancelled and altered to an increasing degree. . . . . It is in the field of air warfare that the probability of increased demand for war equipment appears most likely and it is pertinent to note that the major portion of your company's whole munitions effort is now devoted to the production of material for this type of military operations."

On the general business situation, Mr. Prentis commented: "As long as the global war continues, our national productive output and income in America will probably remain at high levels, with a resultant stimulating effect on your company's own sales volume. When the United Nations gain their final objective in Europe, however, there will naturally be a lessened demand for munitions and a corresponding decrease in the expenditure of our own government for war purposes. Thus the total production of goods and services of all types in the United States will be reduced. Whether this reduction will apply to the manufacture of standard civilian goods remains to be seen. The pent-up demand for such goods created in the war period, during which their production has been curtailed and stocks depleted, may result in sharply increased buying and consequently greater output as soon as manpower, equipment and raw materials again become available for their manufacture. Such a development would create many promising opportunities for your company."

New Plastic Material Now Being Offered By B. F. Goodrich

Announcement has been made by the chemical division of B. F. Goodrich Co. that it has chosen the name "Geon" for a group of unique polyvinyl resins which it has developed and is now offering to industrial users. Geon, from the root word geo (the earth) was chosen because the basic raw materials from which these polymers are derived have mineral origin, says J. R. Hoover, general sales manager for plastic materials.

Two of the resins, Geon 202 and Geon 203, are entirely new vinyl chloride—vinylidene chloride copolymers, different from any others previously developed in this group. The new resins, according to Mr. Hoover, can be processed easily on existing equipment, and will expand the field served by this class of plastic materials.

Coating of fabrics and other materials, insulation of wire and the manufacture of extruded and molded products are among the principal fields of Geon resin, Mr. Hoover says. Purchases of any of the resins are subject to allocation by the War Production Board under General Preference Order M-10, under which the polyvinyls are allocated, although reasonable quantities are available for experimental purposes.

Two chemical types are offered currently. The Geon 100 series are special vinyl chloride polymers characterized by their thermal and light stability, toughness and chemical inertness. Geon 101 was developed especially for electrical applications, such as wire and cable insulation, while Geon 102 is adaptable to general services.

The new Geon 200 series was created to meet the need for polyvinyls which combine increased solubility and thermoplasticity with exceptional stability, chemical resistance and wide useful temperature range. Their resistance to hydrolysis by boiling water or even hot alkali is outstanding in the field of vinyl chloride copolymers, and like the Geon 100 series they have unusual stability to light and heat. Geon 202 is a general-purpose copolymer, more soluble and thermoplastic than either of the Geon 100 resins, while these characteristics are still further stepped up by Geon 203. Geon resins, when compounded with other materials can be processed in many ways, including injection and compression molding, extruding, calendering,, solution coating and film coating. Compositions varying from the rigid thermoplastic to a very soft jelly can be obtained by modifying the Geon resins with other compounding materials. Each composition exhibits to a high degree the many desirable characteristics of the base resin used.

In addition to furnishing the resins in powder form with the compounding done by the purchaser, the chemical divison will supply them in ready-to-use form, either as granules or sheet. Standard Geon plastic compounds are available for many uses, such as fabric coating. In addition, other tailor-made formulations can be supplied for special purposes. It is pointed out that because these materials can be varied so widely in useful properties, it is greatly to the advantage of the prospective user to consult the manufacturer in choosing a compound formulated for a specific need.

Cotton goods production has dropped 86 per cent in Holland since the Germans took over the country four years ago.

WILLIAM R. NOONE & CO.

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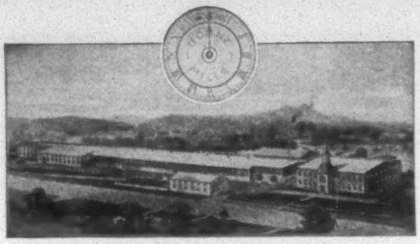

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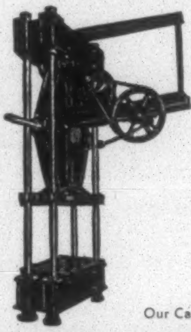

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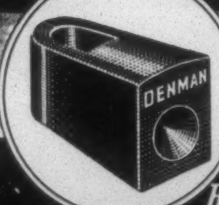

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Committee of Mill Men Now Helping War Department

In order to build a program of increased cotton goods production and facilitate Army procurement of textiles, the cotton textile industry has appointed a committee of representative mill men to maintain close, continuous contact with the War Department, according to Dr. C. T. Murchison, president, Cotton-Textile Institute, Inc. This committee includes Herman Cone, chairman, board of directors, Cotton-Textile Institute; Hugh M. Comer, executive vice-president of Avondale Mills, Sylacauga, Ala.; C. F. Broughton, president of Wamsutta Mills, New Bedford, Mass.; Stuart W. Cramer, Jr., president of Cramerton (N. C.) Mills; and Charles A. Sweet, president of Wellington Sears Co., New York City.

The appointment of this committee is an outgrowth of the conference in Washington last month between industry representatives and Gen. Breheron Somervell and high ranking associates in the Army Service Forces. At this meeting General Somervell reported on the progress of the war on all fronts and on the requirements which the Army service forces were being called upon to meet to satisfy the ever-growing Army needs in all theaters of operation and also to meet the extensive and varied demands of the Allies. He indicated that the pressure for increased production would continue and that an ever-increasing flow of supplies to the battlefronts was imperative and there must be no diminution or interruption. He pointed out that occasional changes in the character of production were inevitable but would have no influence on total volume.

In a statement mailed to mills recently, Dr. Murchison said that the War Department was really concerned over the current production decline in cotton textiles, wished to know the reasons for this drop and is prepared in every way possible in co-operation with the industry to restore output to the levels of 1942. The War Department, he added, through its representatives at the conference let it be known that it was ready at all times to re-examine its own policies and wherever practicable to effect changes which might ease the burden of industry in its fulfillment of government requirements.

He added: "It is recognized that the vast size of the War Department procurement requires the maximum standardization of its procurement methods, but the War Department will make every effort to adapt its procedure to the needs of particular industries. In line with this intention is the present effort to simplify procurement methods and wherever possible to plan for continuity of contracts to avoid the disruptive effects of frequent loom conversions. Of paramount interest to the textile representatives present was the announcement that the Army Service Forces was definitely working toward the adoption of firm price contracts. It is their expressed hope that by June the bulk of Army textile contracts will be so priced as to be exempt from renegotiation. This development is made possible by the accumulated buying experience of Army Service Forces and the assembling with the aid of the industry of adequate cost data which now provide a sure foundation for satisfactory cost analyses.

"It was also revealed that the War Department was keenly aware of the industry's manpower difficulty. Considerable discussion was given to the question of occupational deferments. As is well known, the War Department takes the position that the passage of a national service act would greatly facilitate a more advantageous use of the available manpower supply. In the absence of such an act, it is between the horns of a dilemma. On the one side is the necessity of filling the Army's manpower needs from a limited number of qualified eligible. On the other side is the need to maintain in industry whose key workers who are essential to the production of war goods.'

"Under these circumstances, in any individual case, the initial assumption must be that the Army has first call on the individual. If this assumption is to be denied, the burden of proof is upon the industry. Consequently, mill executives must be alert to the procedures which have been laid down regarding occupational deferments and in extreme cases where production is for military use, representations should be made through the contracting officer to the War Department for assistance.

"The conference was of great significance not only in its considerations of the problems of production and procurement but also in its revelation that attainment of the ultimate objective is primarily a human problem. The involvement of many agencies on the side of the government and of multitudinous enterprise on the side of industry naturally create technical complications and conflicts which can only be resolved by sympathetic understanding and common devotion which rise above the mechanics of the system. The heart-to-heart discussions with General Somervell and his staff go far to supply these important intangibles.

"It was agreed that similar meetings would be held periodically for the duartion and that a sub-committee of the cotton mill representatives be appointed to maintain close and continual contact with the department during the interval periods."

Textile representatives present were Howard Baetjer, Herman Cone, Thomas W. Estes, S. W. Cramer, Jr., W. H. Hightower, W. S. Montgomery, Earle R. Stall, Charles A. Sweet, Hugh M. Comer, C. F. Broughton, C. T. Murchison and P. S. Howe. Representatives of the War Department present were General Somervell, Maj.-Gen. Lucius D. Clay, Maj.-Gen. Edmund B. Gregory, Maj.-Gen. Clifford L. Corbin, Col. Fred C. Foy, Col. Thomas W. Jones, Col. D. N. Hauseman, Col. Robert T. Stevens, Joseph M. Dodge and Glen A. Lloyd.

Policy On Post-War Machinery Stated

Many manufacturers of textile machinery have been offered large contracts for machinery to be delivered at the cessation of hostilities or when WPB releases critical materials. In an effort to establish a policy that will be entirely equitable to both the buyer and the seller, H. W. Butterworth & Sons Co. has formulated the following plan:

H. W. Butterworth & Sons Co. has agreed to accept orders, knowing that the price quoted might be entirely out of line at the time of manufacture. The plan is to quote the price of the machine, certifying the value of the material and the total amount of labor and burden at the time the quotation is made. In the event that either of these items are less than the originally quoted price at the time of completion and shipping of the machines, the purchaser will receive a credit for the difference. In case there is an increase in cost in either of these two items, the difference will be an additional billing by Butterworth to the purchaser.

Photo Courtesy New Departure

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Following are the addresses of Southern plants, warehouses, offices, and representatives of manufacturers of textile equipment and supplies who advertise regularly in TEXTILE BULLETIN. We realize that operating executives are frequently in urgent need of information, service, equipment, parts and materials, and believe this guide will prove of real value to our subscribers.

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AKRON BELTING CO., THE, Akron, O. Sou. Reps.: Ralph Gossett and Wm. J. Moore, 15 Augusta St., Greenville, S. C.; The Akron Belting Co., 406 S. 2nd St., Memphis, Tenn.

ALLEN CO., 440 River Road, New Bedford, Mass. Sou. Repr.: L. E. Wooten, Fort Mill, S. C.

AMERICAN BLOWER CORP., P. O. Box 58, Roosevelt Park Annex, Detroit, Mich.; 7 N. 6th St., Richmond, Va.; 1211 Commercial Bank Bldg., Charlotte, N. C.; Room 714, 101 Marietta St. Bldg., Atlanta, Ga.; Room 309, Jahncke Bldg., 816 Howard Ave., New Orleans, La.; 619 Texas Bank Bldg., Dallas, Tex.; 312 Keller Bldg., Houston, Tex.

AMERICAN CYANAMID & CHEMICAL CORP., 30 Rockefeller Plaza, New York City. Sou. Office and Warehouse, Wilkinson Blvd., Charlotte, N. C., Hugh Puckett, Sou. Sales Mgr. Reps.: John D. Hunter, E. H. Driver, Paul F. Haddock, Charlotte Office; E. J. Adams, 1404 S. 22nd St., Birmingham, Ala.; Jack B. Button, 610 N. Mendenhall St., Greensboro, N. C.; C. B. Suttle, Jr., 423 Clairmont Ave., Decatur, Ga.; K. E. Youngchild, 10 South St., Mobile, Ala.

AMERICAN MOISTENING CO., Providence, R. I. Sou. Plants, Charlotte, N. C., and Atlanta, Ga.

AMERICAN VISCOSE CO., 350 Fifth Ave., New York City. Sou. Office, Johnston Bldg., Charlotte, N. C., Harry L. Dalton, Mgr.

ARKANSAS CO., Inc., P. O. Box 210, Newark, N. J. Sou. Repr.: Jasper M. Brown, 1204 Greenwood Cliff, Charlotte, N. C.

ARMSTRONG CORK CO., Industrial Div., Textile Products Section, Lancaster, Pa. Sou. Office, 33 Norwood Place, Greenville, S. C. J. V. Ashley, Sou. Dist. Mgr.

ARNOLD, HOFFMAN & CO., INC., Providence, R. I. Sou. Headquarters, 2130 N. Tryon St., Charlotte, N. C., Mgr., Walter T. Bunce, Phone 2-4073; Technical Service Men: Reid Tull, 116 W. Thomas St., Salisbury, N. C., Phone 1497-J; Philip L. Lavoie, 2130 N. Tryon St., Charlotte, N. C.; John H. Graham, P. O. Box 904, Greenville, S. C., Phone 2922; John R. Brown, P. O. Box 749, Trussville, Ala., Phone 127; Warehouse, 2130 N. Tryon St., Charlotte, N. C.

ASHWORTH BROS., Inc., Charlotte, N. C. Sou. Offices, 44-A Norwood Place, Greenville, S. C.; 215 Central Ave., S.W., Atlanta, Ga.; Texas Rep.: Textile Supply Co., Dallas, Tex.

ATWOOD MACHINE CO., Stonington, Conn. Sou. Rep.: Fred Sails, Johnston Bldg., Charlotte, N. C.

AUFFMORDT & CO., C. A., 468 Fourth Ave., New York City.

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BARNES TEXTILE ASSOCIATES, Inc., 10 High St., Boston, Mass. Sou. Office, 318 Montgomery Bldg., Spartanburg, S. C.

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BEST & CO., Inc., EDWARD H., Boston, Mass. Sou. Rep.: W. C. Hames, 185 Pinecrest Ave., Decatur, Ga. Phone Dearborn 5974; Ralph Gossett, William J. Moore, 15 Augusta St., Greenville, S. C., Phone 150.

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BUTTERWORTH & SONS CO., H. W., Philadelphia, Pa. Sou. Repr.: J. H. Zahn, Johnston Bldg., Charlotte, N. C.

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CARTER TRAVELER CO., Gastonia, N. C. R. D. Hughes Sales Co., 1812 Main St., Dallas, Tex., Texas and Arkansas; Eastern Rep. (including Canada): C. E. Herrick, 44 Franklin St., Providence, R. I.; European Rep.: Mellor, Bromley & Co., Ltd., Leicester, England.

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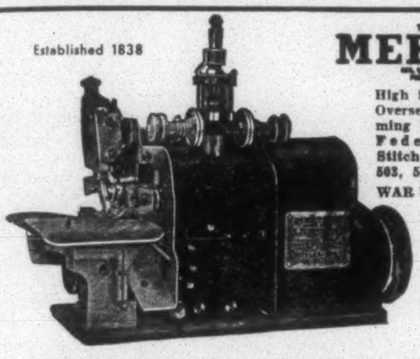

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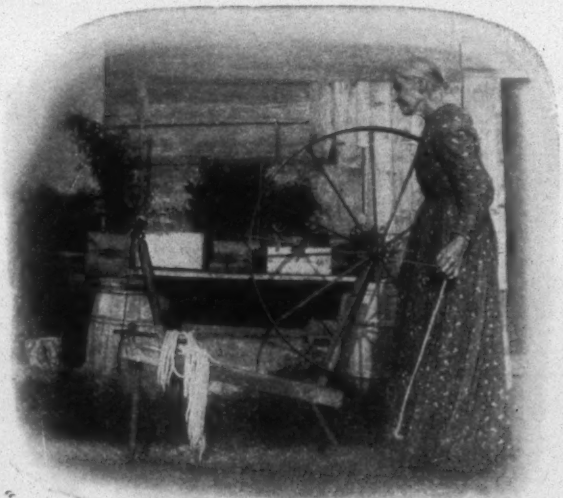

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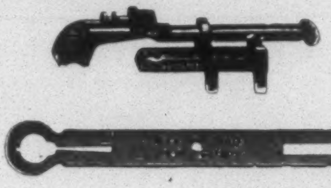

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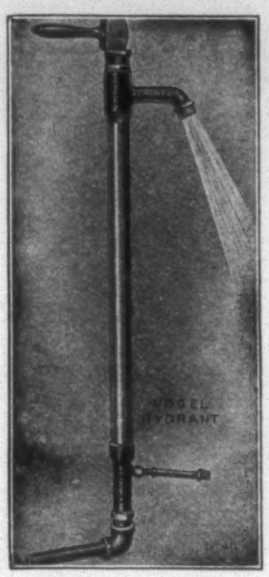

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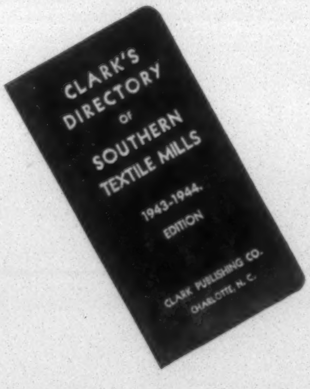

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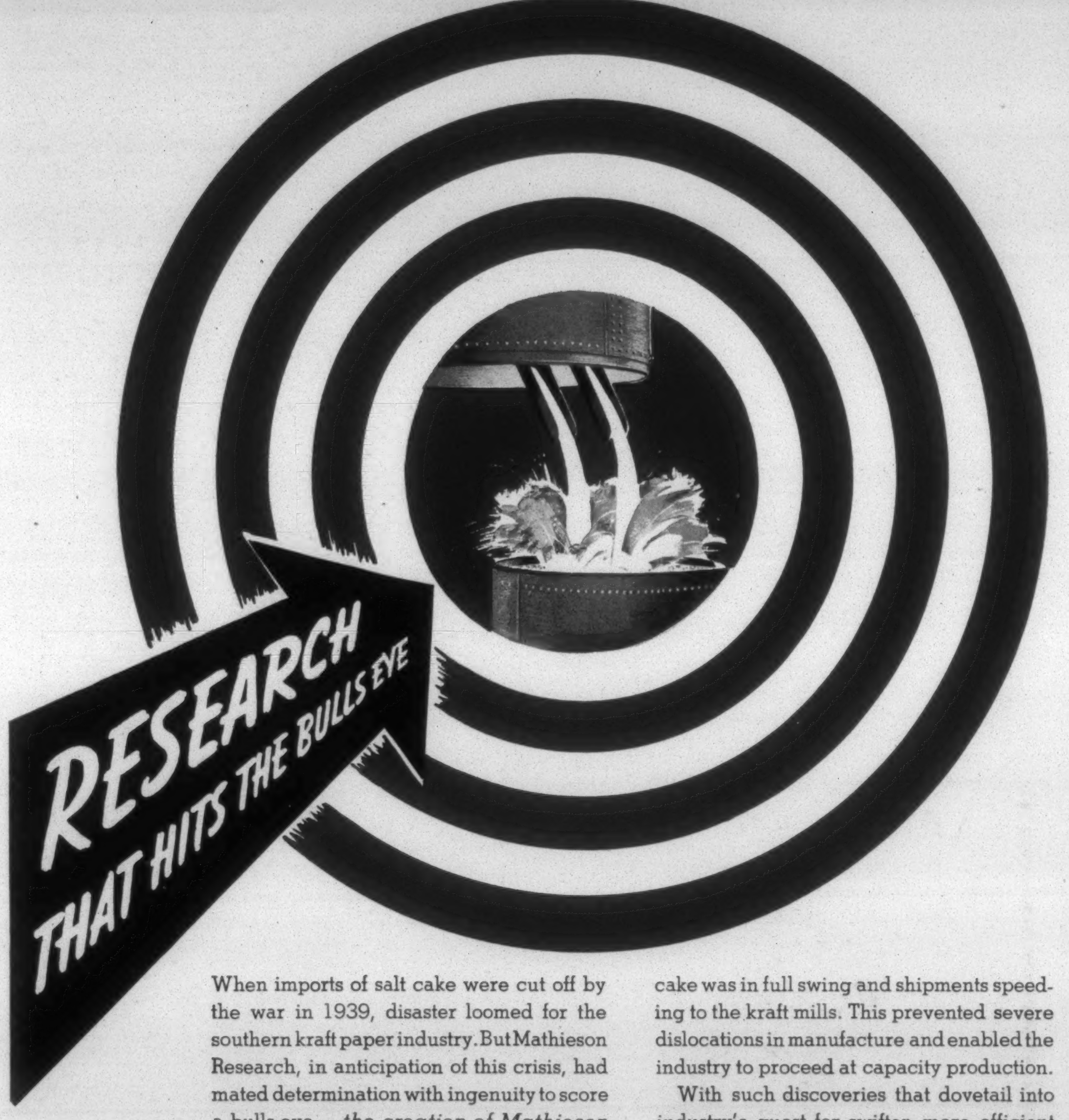
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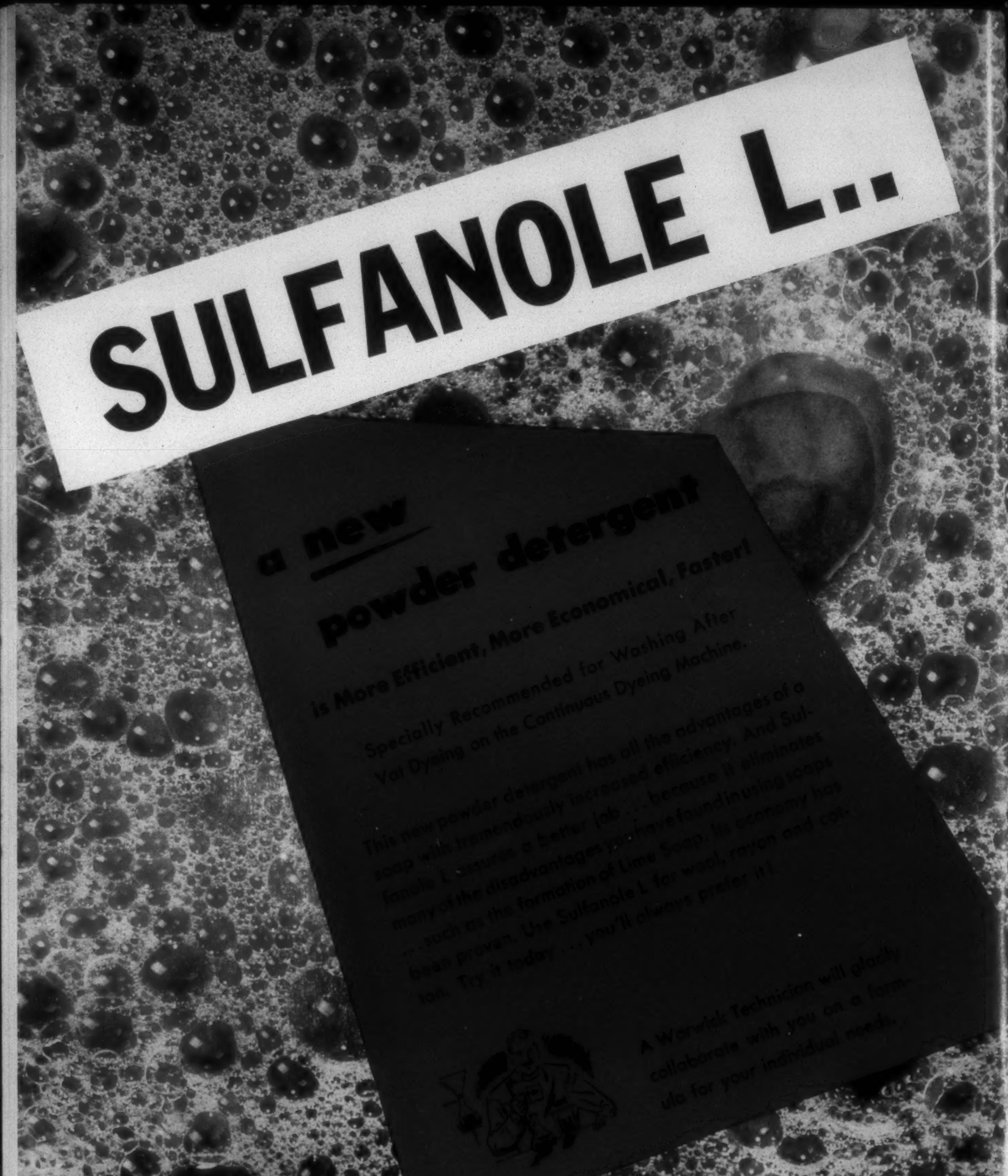

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